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Address

SOME OF THE RELATIONS OF OCCUPATIONS TO MEDICINE *

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On an occasion which, as I comprehend it, serves not only as your annual meeting, but also, to a considerable extent, as a means of formally introducing your body to the school of medicine recently inaugurated in this state, it is interesting to reflect that a generation ago conditions were such that the influence exerted on the profession at large by any individual medical school in this country was exercised chiefly through the clinicians connected with the school; while, at present, circumstances are so largely altered that a school like that situated here may have no dealings with the directly clinical side of medicine and yet, youthful as it is, be generally recognized as certain to have a large influence on medical progress, because of the character of the provision it makes for the teaching of the medical sciences. Indeed, the change has been so great that we now hear more frequently and more insistently than ever before the warning that has been uttered at times throughout several generations—among others, by such wise and charming writers as John Brown and Oliver Wendell Holmes—the warning, that is, that we are in danger of overdoing the scientific side of medical instruction at the expense of the clinical. I do not intend to discuss medical education here, or even that constantly recurring question as to the relative amount of time that may properly be assigned to the clinical branches and the medical sciences; but, since it bears closely on my purpose in discussing occupations in their relation to medicine, I would say that I do not feel the slightest sympathy with the frequently expressed fear that the tendency at present is to train up investigators, rather than clinicians, my reason being the very definite one that, to my mind, a sound clinician is essentially an investigator, whether he works in a laboratory with all possible facilities or in hard country practice; whether he conducts extensive studies of special questions or simply attempts to learn as precisely as possible what needs to be done for each separate patient. In the latter case, as much as in any other, he will be successful and useful in direct proportion to the degree to which he has been trained into the point of view and the methods of a careful investigator.

The most apparent defect in medical teaching, it appears to me, is not that students are taught too largely of the medical sciences: it is rather that they are not yet sufficiently trained in making their more scientific information a living and integral part of their clinical procedures, and still tend to place the two in their minds on each side of a wide chasm that is crossed only by means of bridges so frail and slippery that they are all too seldom used. This is not due solely to the methods employed by those who teach the medical sciences; it is equally and perhaps even more largely due to the tendency of those of us who are clinicians to allow both ourselves and our students, in considering clinical questions, to wander more widely into mere impressions and crude hypotheses than we should permit ourselves to do in dealing with matters that relate directly to the medical sciences. This attitude, so common among clinicians, is, I think, in large part due to our misfortune in having been brought up to the almost religious belief that the practice of medicine is an art, rather than a precise science, and an almost purely empirical art at that—a partial truth that, happily, is continually growing less true, but that has done much to obstruct progress, because we can so readily fall back on it, when we feel inclined to be easy-going, rather than precise.

In large part, also, the relative lack of precision in clinical work, a lack that is seen especially in therapeutic practice, is due, not to the impossibility of being exact, but to the fact that it is somewhat difficult to use precise methods in the circumstances of practice, which are so much less favorable to such methods than are the surroundings of the medical sciences. It is, however, largely because it so strikingly illustrates the fact that precise methods tinctured with some personal investigativeness are open to us all even in the most commonplace things in practice to a much larger extent than we customarily make use of them, that a study of occupations in their relation to medicine appears to me to be a matter of most especial interest as an example of the practical value of a training in the preliminary subjects in medicine such as that offered now by your own state school; for, in the consideration of occupations in their relation to disease, and in appreciating their effects properly, we need to make constant and lively use, not only of our knowledge of the medical sciences, but also of whatever knowledge we may possess of an infinite variety of technical subjects. Indeed, in the course of an ordinary practice any one can in this connection, by means of a little extra precision but with very little extra effort, both gain interesting diversion and varied knowledge by inquiring into this point, and at the same time elicit many facts that are extremely valuable in properly comprehending and in treating cases of all sorts; and these facts are often overlooked entirely by the ordinary routine method of recording the occupation of an individual. This point in the history affords, to my mind, more than does any other, an endlessly varied interest, both humane and scientific, on the one hand, and great practical help, on the other; and yet, in many an instance, very little attention is devoted to it.

* Address in Medicine at the Annual Meeting of the Wisconsin State Medical Society, Madison, July 1, 1909.

INEXACTNESS IN CASE RECORDS

We often content ourselves with the mere names of occupations; indeed, we very frequently find in case-records names that not only mean absolutely nothing as to what the individual at hand does when at work, but that are mere general terms, covering a host of different occupations—terms, I mean, such as laborer, mechanic, machinist, mill operative, and the like, which are very common even in the best kept of hospital records, so common that Arlidge,[1] in his work on occupational diseases, stated that hospital records are so inexact on this point as to be practically worthless to one who is studying the effects of occupation on health. Though much information has meanwhile been accumulated, there has been no general change in this regard since Arlidge's book was written. While, therefore, we make a great point of putting down the name of a patient's occupation in his record, this is only too often merely a part of a general dull routine, and is frequently of no more value, so far as diagnosis and treatment are concerned, than the name of the patient himself. To be sure, if the patient says that he is a lead-worker, his whole trouble often becomes illuminated at once; if he is a drayman or works with heavy metals, we see immediately that he is subject to severe physical strain; if he is a sailor, we know that he is exposed to rough weather; if he is in finance, we know that he is likely to have severe nervous strain. There are, of course, a variety of such ways in which our common sense and our casually acquired knowledge make us see at once some of the main ways in which particular occupations may affect people; but it may fairly be said that we have too little system in dealing with this question, and that it is too generally the custom to pass over the occupation and go on into the other details of the history, unless there are some peculiar conditions in the case that suggest an unusual degree of relation to the individual's work or unless the mere name that the patient gives recalls at once some familiar consequences of such employment. This is more especially true of work in internal medicine. In some of the specialties there is a wider and often very alert appreciation of the importance of the occupation.

Indifference to this point is assuredly a very stepmotherly way of treating what is one of the chief factors in producing disease; probably, indeed, the most important of all, not only in interesting and unusual cases, but also in a large proportion of instances of the most every-day and commonplace types of disorders. There is a vast difference in the interest and profit attaching to a record of the occupation, if, on the one hand, one merely records the name of the trade, or, on the other hand, inquires routinely into the exact nature of the work in so far as concerns certain points that are likely to have an especially important bearing on the type of case under consideration. It would be folly to recommend that we elicit all the details of the work in all instances, or that we attempt to carry knowledge of the details of all occupations. Unless one should devote his entire time to acquiring information regarding the endless technical details of the almost innumerable occupations that we meet, it is impossible to conceive of carrying with us knowledge of even a small fraction of these sufficiently complete to make us see at once, when the name of a certain employment is mentioned, that this means a particular kind of physical or nervous strain, an especial exposure to dust or to some poisonous substance, or unusual tax in some other way. The impossibility of this is seen, for instance, in the conditions pertaining to lead-poisoning.

1. The Hygiene, Diseases and Mortality of Occupations, London, 1892.

OCCUPATIONS PREDISPOSING TO PLUMBISM

Years ago Layet collected one hundred and eleven occupations in which there was more or less danger of lead-poisoning; and, through clinical experience and reading, I have been able to add a considerable number to this list. The uses to which this metal is put are so nearly endless that new sources of poisoning, previously unheard of, are still occasionally appearing. We cannot hope to remember such a mass of facts about one particular form of occupational poisoning, and we can still less attempt to remember the details and varied kinds of dangers associated with large numbers of occupations. We can, however, adopt some system of attempting to elicit the main elements of importance in relation to a particular case. This, I think, can be most readily done by, first of all, getting the patient to tell us briefly, but as clearly as he can, the main details of his work; and then attempting to follow particularly any suggestion that comes from this or from his type of disorder. In case I am not already familiar with the details of the occupation, I try to learn in different cases, as far as possible, what sorts of substances the patient works with, what position he works in, how heavy his work is, what his hours of work are, whether it is day or night work, the degree of exposure to heat, cold, or wet, and a few similar points; and, especially among well-to-do patients, but also with those of simpler life, I determine, of course, the degree of responsibility and general nerve strain.

I am aware that in mentioning such commonplace matters and insisting on their importance I lay myself open to the caustic criticism that James Mackenzie[2] applied long ago to Friedrich Hoffmann, when he said that there are certain persons who go about talking of well-known things as if they were themselves the discoverers of them. While I do not lay claim to be the discoverer of the importance of such things, I do have the temerity to repeat the statement that there is a vast difference between the results obtained in this way and those that one gets from accepting the mere brief statement of the name of the occupation as it is given in the ordinary history.

I may possibly make it clearer that I am not urging the use of methods that are employed by every one, if I give some illustrations. Some of you may not be familiar with the fact that carriage-painters are very much more subject to lead-poisoning than are house-painters. Stüler found in Vienna that they were from ten to twenty times as subject to lead-poisoning as were house-painters; and the average each year among carriage-painters was nearly three days' illness from lead-poisoning for each man employed. Of the painters whom I have seen in the last five years with lead-poisoning, about half were carriage-painters, while, of course, carriage-painters are only a small fraction of the whole number of painters. If we inquire into the details of their work it is perfectly clear why this should be the case, and we need not have been taught it beforehand to realize that it is likely to be true. Contrary to the well-known conditions under which house-painters work, carriage-painters apply a large number of coats of paint and varnish, polishing between each coat, and thereby enveloping

2. A History of Health and the Art of Preserving It. An Account of All that has been Recommended by Physicians and Philosophers toward the Preservation of Health from the Most Remote Antiquity to the Present Time, Edinburgh, 1758.

themselves in dust which contains much lead. They also work largely in an enclosed atmosphere, to prevent dust and dirt from being blown on the surface, which must remain smooth. Clearly their opportunities for lead-poisoning are very great, as are their opportunities for acquiring respiratory diseases, tuberculosis and the like, to which they are very subject.

Again, we know well that workers in wood are subject to the moderately bad mechanical effects of ordinary sawdust. When we inquire more precisely into this, however, we find that a certain number of workers, most strikingly those engaged in working with boxwood, teak, and sequoia woods, are subject also to the general poisonous effects of alkaloids or other substances contained in these woods, which may have interesting and rather serious general effects, chiefly on the circulation and, still more frequently, a marked local effect on the mucous membranes and the skin—a matter that is of some importance in this country and that has been discussed in an interesting way in relation to conditions in England by Oliver.[3]

SCIATICA IN LOCOMOTIVE ENGINEERS

I know of no better additional example of the necessity of obtaining data regarding the occupation of patients than that mentioned to me by Dr. Latta, head of the Pennsylvania Railroad Relief Service. It was found that an especially large number of cases of right-sided sciatica were being reported in locomotive engineers, and it seemed quite clear that this was due to something peculiar in their work. An exact inquiry into the conditions under which these men worked, so far as they bore on the point, almost at once laid emphasis on the fact that every one had known before, but had given no attention to, namely, that the engineman had customarily sat sidewise on the bench of the right-hand side of the engine-cab, and, in the constant jolting, the weight of his body was continually thrown violently on the right thigh and buttock. The simple expedient of cutting off the forward part of the bench, so that the engineman had to sit squarely facing forward, sufficed to reduce the number of cases of sciatica to the normal and to eliminate any especial prevalence of right-sided cases.

DISORDERS DUE TO HEAT

I have recently had a somewhat analogous experience in connection with the disorder that I have described as occurring in consequence of exposure to severe degrees of heat. I saw some years ago two peculiar cases of acute and violent muscle-spasm that had no analogues in medical literature; and, on more exact inquiry, I learned that both were in men exposed to unusual degrees of heat. Inquiry among other men who were severely exposed to very high temperatures in their work showed that nearly all men in such occupations are familiar with such attacks and that a large proportion of them have had attacks themselves. Through subsequently watching for such cases I have seen a number more, all exhibiting the same cause. I find through physicians whose work brings them into frequent touch with persons in such occupations, through the men themselves, and through their employers, that this, which is clearly a well-defined disorder, though not recognized in general medical literature, is astonishingly common in certain occupations; is of a good deal of importance from the economic standpoint, in its effects on the men and on the productiveness of the occupations in which they are employed; and seems to be always due to the same cause.

I have become convinced, also, that there are other important effects of heat that have not been generally recognized in medical literature, because attention has been too exclusively fixed on so-called heat-stroke and heat-prostration as consequences of exposure to high temperatures. More thorough study of conditions in cases that I have seen myself has shown instances of nervous lesions, such as focal meningitis, that were almost undoubtedly due to local or general exposure to intense heat, and I have seen likewise more or less serious effects on other organs. The literature of occupational disorders also contains numerous more or less well-substantiated statements as to the effects of heat in various ways, particularly on the nervous system.

More than seventy-five years ago Thackrah[4] said that MacTurk had described to him the frequency of various head-symptoms in workers in heavy metals—due, he thought, to heat; and Layet, a generation ago, described similar conditions. The statistics of some of the foreign sick-benefit societies and the writings of various authors indicate that several nervous conditions, meningitis, epilepsy, insanity and even suicide, are relatively common in some of these occupations. More or less serious circulatory weakness, anemia, acute and chronic disturbances of digestion, acute and chronic nephritis, respiratory disease and skin-lesions also appear to be unduly frequent in such persons. In addition to this, there has been much discussion regarding the incidence of cataract, retinal and choroidal changes, and chronic conjunctival lesions in glass-blowers; and similar conditions clearly occur also, though less well recognized, in iron-puddlers and other persons whose eyes are exposed to very intense heat. Dr. de Schweinitz states that he could often tell whether men working at puddling-furnaces were right-handed or left-handed by studying the effects of their work on their eye-grounds; and Röpke[5] states that Quint described to him cases of right-sided cataract in right-handed iron-workers and left-sided cataract in those who were left-handed.

The instances that I have mentioned are, of course, exceptionally striking, and a study of them has been unusually productive of results. I venture to state, however, that there are few, even of the commonplace occupations, in which more careful inquiry into the details of the work will not be repaid by a much broader understanding of some of the ills that people engaged in these occupations complain of—even though one may not often elicit points that are worthy of separate record in medical literature. For instance, it is known that those who work with heated tallow and other animal grease are subject to gastrointestinal disturbance, apparently from the volatile fatty acids that are given off and that the workers ingest and inhale. Recently I saw a man whose chronic gastroenteritis was almost certainly due to his work as a bullet-dipper, in which he was constantly exposed to the fumes of hot grease.

LOCAL EFFECT OF STRAIN

One of the first cases that aroused my special interest in the effects of occupation was an instance of that extremely common and endlessly varied subject, the local effects of strain; and it was, at the same time, an instance of the necessity for understanding quite precisely what the individual does. This man had signs suggesting contraction at the base of the left chest. He had had pleurisy, but on the right side. I was puzzled to explain his physical signs, but the man finally gave the whole

3. Diseases of Occupation, 1908.

4. Effects of Arts, Trades, and Civil States and Habits of Living on Health and Longevity, Second Edition, 1832.

5. Weyl's Handbuch der Arbeiterkrankheiten, 1908.

explanation himself. He had been put down in the history simply as a machinist. He elaborated on this by saying that he was a "bit-and-auger fitter-up"; and further inquiry showed that he had spent most of his working hours for twenty years with his left arm advanced holding the piece of steel that he was fitting, and turning it forcibly every few moments in such a way that each time he did this he twisted the lower part of his left thorax inward.

SOME OCCUPATIONAL CAUSES OF HEART STRAIN

These effects of strain, both the general effects and especially those that are exerted on particular organs, are daily experiences and frequently most interesting and illuminating; and the fact that they are every-day things, of course, makes them of greater interest. They are of particular frequency and importance in connection with circulatory disorders. Not long since I saw in quick succession a man with mitral insufficiency that appeared to be well compensated but that gave him much distress at his work; another man with aortic insufficiency that was giving him terrible distress when he was admitted to the ward but improved with surprising rapidity; and a third who had very dangerous myocardial failure with dilatation. The last-mentioned man had undoubtedly damaged his heart by alcoholism some years before, but neither with him nor with the others was there apparent any sufficient immediate reason for the development of symptoms. In none of them did the occupation as given in the record seem a sufficient cause for their symptoms. The first man was recorded as a carpenter; the second as a paper-cutter (starting and stopping a cutting machine); the third had a newspaper stand. Inquiry showed, however, that the first was a specialist in his trade in that he worked for large builders and that his duties consisted almost entirely in putting up heavy parts, and he had to lift every few minutes and put into place pieces weighing from one hundred to one hundred and twenty pounds. The second man proved to have as the chief part of his duties not simply cutting paper, but lifting and placing in the machine every few moments bundles of paper weighing from fifty to one hundred pounds; while the third man himself delivered newspapers to his clientele and this meant that in order to do his work quickly and hold his trade he set off twice daily with a package weighing fifty pounds or more (about one hundred pounds with Sunday editions), and went a circuit of two or three miles as nearly on the run as possible.

I would repeat that I am well aware that in dwelling on such simple things as important I am liable to the same comment that one of my friends applied recently to a distinguished man: "He learns out loud simple things that other persons know already." I mention them deliberately, however, for the very reason that they are the simple things that we meet with daily. Such things could be mutiplied *ad infinitum;* but I would especially note their importance in connection with chronic diseases of the joints, in a large proportion of which, more particularly in non-infectious cases, strain plays a most important part, especially in some of the apparently obscure cases of spondylitis and, of course, in flat-foot and knock-knees. Indeed, the latter are so common in some occupations that the laity, especially the Germans, have applied special terms to the disorders or infirmities produced.—*Bäckerbeine, Kellnerbeine.*

MERCURY POISONING

Finally, before leaving this part of the subject, let me give an instance of the fact that little points in the abstract information that we have acquired in some of our earlier studies not infrequently come into play in a very lively and human way in connection with occupations. The fact that mercury is volatile at ordinary room-temperature does not appear to be of much practical value in medicine until we see the exceedingly interesting results of its volatility in those who work with mercury; and recently this came even more closely home to me when I found a friend, who is much engaged in working with physical apparatus, exhibiting the remarkable erethism and apprehensiveness so common in chronic mercury poisoning, together with apparently causeless but persistent diarrhea. As an example of his nervous state, I would say that he told me that he left letters unopened for days for fear that they might contain some news that would distress him. He had an open jar containing mercury constantly on his office-desk, and had frequently spilled quicksilver on the floor of his office and of his bedroom, without paying any attention to it. About two-thirds of the twenty-four hours were spent in these two rooms. After he had had his attention called to this and had had the floors and cracks very thoroughly cleaned, puttied, and painted, and kept his mercury-receptacle tightly closed, his diarrhea and neurotic symptoms disappeared. They have since remained absent, now more than a year.

An undescribed, but perfectly rational cause of occupational mercury poisoning, which depends on the well-known fact that mercury is absorbed through the skin, is to be found in the custom that many dentists have of working up their amalgam in the palms of their hands. I have notes of two dentists who acquired poisoning in this way. I did not see either of these cases myself, but both are well authenticated by physicians.

Instead of being a frequently dull and profitless part of history-taking, occupations of even the most ordinary kind, when looked at in this way, become a constant source of useful information and of very interesting diversion. When viewed in this manner one appreciates also the second point that I would make, that is, that we may profitably look on the conditions in occupations as providing numerous massive experiments from which one can gain many broadening conceptions, and, furthermore, from a study of trades new facts that influence general medical conceptions may occasionally be gained ready-made, especially if the suggestions that they give are made more secure through animal experimentation and the precise studies that the latter permits of. In this way we can get answers to many questions that, approached by any other means, are much more difficult and at times impossible to elucidate, and that, in certain instances, have very important influence on our conceptions of some forms of disease and our methods of treating them.

It has been chiefly from study of occupations that we have learned the important effects of local and general strain in producing their very striking results on the circulation and other general functions or on especial local tissues. Occupations have also, of course, furnished practically all our knowledge of the effects of dust of various kinds, and our conception of the importance of commonplace things in producing disease must certainly be made much more emphatic by considering the dreadful evidence of the influence of very dusty occupations on health, evidence such as that found in the statistics of Sommerfeld,[6] Calwer,[7] and others regarding the duration of life of workers in stone, which appears

6. Die Berufskrankheiten der Steinmetzen, etc., Berlin, 1892.
7. Die Berufsgefahren der Steinarbeiter. Denkschrift an dem Bundesrat, 1901.

to average only about thirty-three years. That is, as Calwer remarks, "a boy of fourteen taking up this occupation has a prospect of only about nineteen years more of life." Calwer puts the mortality of stone-cutters at over 5 per cent.; while the average among all persons studied was only a little over 1 per cent. Other figures showing the possible results of dust-inhalation in an astounding way are those of C. I. Birmingham[9] regarding the ganister-grinders in England, whose annual mortality reaches as high as 179.8 per thousand. Fortunately, this mortal industry employs but few men. Oliver has also given a most interesting description of the curious effects of gold-mining on the Rand in South Africa, an occupation that has had results only less deadly than ganister-grinding.

There are some exceedingly striking differences in the effects of different forms of mineral-dust. In a plant with which I am very familiar, the men stay for hours each day in an atmosphere so charged with dust from crushed ore that one can see only a few feet away; and yet, in over a decade, no marked bad results have appeared as a consequence. The difference is attributed by an able engineer who is familiar with the last-mentioned place, and who was also on the commission that investigated the miners' disease on the Rand, to differences in the physical characters and the solubility of the two forms of dust. It is doubtful whether there is not some other more peculiar explanation, however, for Oliver especially notes that certain of the miners in India, although they work with the same character of rock, escape the effects that are seen on the Rand.

LOCAL EFFECTS OF POISONS

It is also largely through our knowledge of occupations that we have learned of the curious way in which many poisons exert their effects on particular tissues, a point that is seen so strikingly in the fact that lead, in a large proportion of cases, picks out not only the nerves of the upper extremity, but a particular nerve in the forearm, in adults; while in children it more commonly attacks the nerves of the lower extremities. Arsenic, on the other hand, usually attacks most severely the nerves of the lower extremities; and while arsenic violently affects sensory nerves, lead scarcely does so at all. Methyl alcohol, in strange contrast to both these, shows a striking affinity for the optic nerve alone, a peculiarity that, curiously, is to a large extent shared by the newer organic preparations of arsenic, atoxyl and arsacetin. Facts like these have largely influenced our conceptions of toxemias, and help to point the way toward future precision in understanding and controlling toxemias.

There are a variety of other ways, also, in which important general conceptions have already been gained from occupations. A number of points of this kind that appear to me to be of great interest I have not seen emphasized. For instance, does it not greatly help to define our views of hysteria and neurasthenia (or of the condition that is now fashionably termed psychasthenia) to know that every conceivable symptom of these states occurs either in carbon bisulphid poisoning or in chronic mercury poisoning and that hysterical laughter and tears are common in chronic manganese poisoning. The symptoms usually disappear as the poisoning is relieved, and are, therefore, a direct effect of the poisoning. In chronic mercury poisoning there is in most cases absolutely no evidence of any organic disease that can be focalized, and the same is often true of carbon bisulphid poisoning. In the latter, however, there may be all forms of combinations of apparently functional disorder with the signs of organic disease, from the slightest to the most severe, and at times there remain permanent evidences of spinal lesion or persistent psychoses.

Such conditions properly make one suspect even more strongly than before that such states are *usually* due, not to mere psychic factors, but to some toxemias, and probably often to some special form of toxemia—when we consider that these neurotic symptoms are so frequent in certain known forms of poisoning and so closely dependent on them, while in other forms of poisoning they are actually uncommon. Surely the frequent toxic origin of such states is made very probable by Köster's experiments, in which he produced in rabbits, by exposing them to carbon bisulphid, glove-like areas of anesthesia; or, in other words, a characteristic hysterical stigma. This makes one feel even more strongly inclined to check the unbridled advance of pure psychotherapy in this country, especially when it is employed by non-medical persons.

On the other hand, we have likewise striking evidence that such neurotic states may at times follow on purely nervous and chiefly psychic influences—evidence provided by the studies of telephone-operators, for example, whose work is so full of strain that Wernicke[9] stated that every one of them who continues at work for several years becomes hysterical. This is probably an extreme view, but nevertheless Schuster,[10] Tommasi, and others, who also have studied this question, agree that hysteria and neurasthenia are most unduly common among these persons.

INFLUENCE OF OCCUPATION ON POSTERITY

In the half-medical and half-economic question of the influence of occupations on future generations, there are scarcely any more impressive points than those found in the fact that the mortality among the infants of mercury-workers is much higher than even the distressingly high figures given by the French and many other foundling asylums; and Constantin Paul's and Lewin's[11] studies of mothers who were engaged in working with lead and its salts showed even more dreadful effects on their progeny. Among a group of the latter women that Paul studied there occurred 123 pregnancies, of which 64 terminated in miscarriage, 5 in still-born children and 4 infants died after premature birth, while of the infants that lived longer, 20 died in the first year of life, 8 in the second year, 7 in the third, 1 later, and only 14 were living at the time of the report. Such effects are, I am sure, due in part to direct placental poisoning of the fetus or at times to poisoning through the mother's milk after birth, for lead has repeatedly been found in the fetuses of these women, in the bodies of their infants that died soon after birth, and in the milk of the lead-poisoned mothers. It is however largely due also to the effects on the child produced by the general degradation of health that this poisoning causes. This fact and the much broader fact that the parent has a profound physical responsibility toward the child are wonderfully illuminated by the observation that seven women who were the wives of men working in lead, but who were themselves free from lead-poisoning, had in the course of 32 pregnancies 11 miscarriages and 1 still-birth, while 8 children died in the first year, 4 in the second year, 5 in the third, 1 later, and only 2 lived. In these instances there was essentially no possibility

8. Quoted by Oliver, loc. cit.

9. Monatschr. f. Psychiat. u. Neurol. Ergänzungsheft, xvii.
10. Weyl's Handbuch der Arbeiterkrankheiten, 1908.
11. Berl. klin. Wchnschr., 1904, p. 1074.

of lead-poisoning in the fetuses and infants, and the dreadful effects must have been due to the disturbed health of the father. There are possibilities suggested by this of valuable studies on heredity, and it clearly shows that we tend nowadays to swing too much to the side of environment in explaining disease. Such studies show also that we probably think too quickly of lues when we get a history of habitual abortion.

These latter points that I have mentioned as being illuminated by a study of occupations are semi-medical and semi-philosophical. There are many more of the same kind that are of very great interest, such as the direct influence of various occupations on the occurrence of alcoholism, sexual immorality, and other forms of depravity; the effect of employment on home conditions; the influence of the latter secondarily in producing depraved nutrition and its consequences, especially tuberculosis; and many other such questions. Besides these, however, there are numerous points that are open to investigation by the more precise methods of the laboratory, and particularly by animal experimentation; and in some instances such studies are perhaps capable of settling or greatly clarifying important questions.

Opportunities for valuable study of this sort have repeatedly gone begging until the matter was cleared up in other ways. For instance, there is no more important practical fact in controlling infectious diseases than that which has been borne in on us in overwhelming fashion by the studies of recent years—the commanding influence in the propagation of these diseases of more or less direct contact with the sick. Filth, important as it is in providing conditions favorable for the spread of infections, has taken a place of secondary importance in managing them, for contact can never be controlled, but only lessened, through controlling filth. The conviction that this was likely to be true and the stimulus to undertake the work that would prove it might have been gained much earlier than it was had thoughtful attention been given to studies such as those of Augustus Gay[12] on "nightmen" scavengers and dustmen, which showed that, while these men spent their lives chiefly in dealing with filth, they exhibited an unusually good average health; and the limits of the relation of dust and dirt to disease are made much clearer by the fact that Oliver[13] reached similar conclusions from his studies of the "dust-women" of London, whose occupation consists in rescuing petty trifles from dry refuse and sweepings. Our general position at the present day in regard to this whole matter of infections was long ago stated tersely and clearly in Gay's conclusion that "filth is rather the *nurse* than the *parent* of fever." Earlier appreciation of this would inevitably have led to earlier appreciation of the actual importance of contact.

Again, it is not improbable that at least one, and perhaps more, of the valuable observations of the Pawlow school and of those who have followed Pawlow might have been brought out years before they were had thoughtful attention been given to a very old method of preventing lead-poisoning, which probably has some virtue. More than one hundred and twenty years ago Richardson[14] said: "In order to defend themselves from the bad effects of lead, all those that are in any manner exposed to its daily influence should eat some fat broth, or bread spread thickly with butter or lard, before they enter on their work." He also recommended salad-oil, likewise to be taken fasting. The latter measure is, I know, still used in some lead-works, and in some of them it is required of the men, with, it is claimed, good results. Not improbably it does good; at any rate had the suggestion that this point gives been followed up it might have been shown long ago, instead of only in recent years, that fats depress the secretion of gastric juice and have important dietetic use because of this fact, and it might likewise have been found as a corollary to this, long before Oliver, Bedson and Best actually pointed it out, that the hydrochloric acid of the gastric juice is the chief factor in getting the insoluble lead salts into solution, and thereby causing their absorption. It is an interesting fact, also, though not a very relevant one, that other observations than those mentioned indicate that the gastric hydrochloric acid is a dominant factor in leading to lead-poisoning. Carnivorous animals are much more subject to lead-poisoning than are herbivorous when living about lead-works, very probably because the former have a much higher percentage of hydrochloric acid than the latter.

13. Oliver: Dangerous Trades, etc., 1902.
14. Chemical Principles of the Metallic Arts, with an Account of the Principal Diseases, etc., Birmingham, 1790.

RELATION OF OCCUPATION TO MALIGNANCY

There would appear to be an opportunity, also, to advance our knowledge of cancer in ways that might be very useful through studying occupations more accurately. There is sufficient evidence that chimney-sweeps and workers in tar pitch and paraffin get cancer from the substances with which they come in contact in their occupations to make it desirable to attempt more earnestly than has yet been done to determine what the nature of the peccant substances is—whether chemical or possibly micro-organismal—and the character of the cell proliferation that they produce in the earlier stages. There have been a series of studies of this matter, but not convincing ones. It appears to me to be not a question merely of chronic irritation of the skin in any of these conditions; for in a considerable variety of occupations severe skin irritation is common, as in bakers, and in a number of them (chrome-working especially) violent non-malignant skin lesions occur frequently, but in only a very few occupations do progressive proliferative changes in the skin appear to be set up. A similar tendency to cancer of the skin prevails among gardeners and agriculturalists, who have a very abnormally high incidence of this disease. There is evidence that this is not true of these occupations in certain regions, as in Erfurt (Loth: Weyl's Handbuch), but this may indicate the interesting possibility that the exciting cause is limited to certain localities.

Such are some of the suggestions regarding investigations of general significance that are to be obtained from a knowledge of occupational conditions. There are many other suggestions of interesting studies that relate to especial disorders themselves, rather than to general medical questions. An important instance of this is carbon monoxid poisoning. This is, in the first place, probably the most important form of suicidal poisoning at present; it is a somewhat frequent form of accidental poisoning from broken gas-mains or house-pipes, Dr. R. S. McCombs having seen over 500 such cases, he tells me, in a few years in his work with a large gas company. It is also an occasional cause of more or less serious danger to families from poor drafts in heating apparatuses. Beyond this, however, it is a somewhat common form of intoxication in men working in iron and other mills and furnaces, in miners, in those working in deep excavations, in those employed in the commercial use of electric furnaces (which are becoming of considerable

industrial importance), and even in laboratories in which the electric furnace is used in investigations. The poisoning occurs, furthermore, in men in fire companies and a variety of other occupations, the most recent source of it being the exhaust of automobiles—chauffeurs and car owners whom I know having repeatedly been mildly overcome when running the engine of a motor-car in a small, closed garage for some time and serious cases having been reported in noteworthy number. It has even caused somewhat serious accidental poisoning of the occupants of a closed automobile in which there was a defect in the floor above the exhaust (Oliver). For a subject that has so much clinical interest, especially to those engaged in hospital practice, and one that relates to such a variety of occupations, the literature is in a curiously unsatisfactory state and is much in need of a systematic overhauling and improvement as regards sources of the poisoning and many points in the clinical history and treatment, and a determination of the importance or lack of importance and the clinical characteristics of chronic poisoning of this sort, from both accidental and occupational sources, is especially desirable.

There is no dearth of subjects to work on, and the problems vary from those that are very simple to those that are so complex that one can scarcely hope to add more than slight fragments of knowledge. We do not need to search for a subject to work on so much as we need to avoid the superficial methods of reaching conclusions that have been so common in this class of studies. Thackrah very properly said of Ramazzini,[15] who was the earliest writer on this subject, that he had too strong a disposition simply to investigate the conditions surrounding an occupation in a general way, to decide that certain results must occur, and then to describe these results as occurring—a tendency that Thackrah modestly says he has often detected in himself. It is a tendency that may be seen widespread in medical literature, and it has caused many erroneous statements to become traditional.

EMPHYSEMA IN GLASS-BLOWERS

For instance, the teaching that glass-blowers and those who play on wind instruments are very subject to emphysema is quite general; but the most recent studies of the musicians in the German military bands, and the studies by Prettin and Leibkind[16] of glass-blowers who had been at this occupation for at least ten years, are directly opposed to this. The latter showed that only five of 230 glass-blowers had emphysema, and it was probable that in all these cases it was due to other causes than the glass-blowing. These observations are concurred in by Schmidt and others. This, then, is apparently a tradition and not a fact. It is also possibly an illustration of the adaptability that tissues frequently exhibit to an extra tax, so long as they are not diseased, though it appears to me that careful observation of these persons shows that the strain comes very much more on the mouth cavity than on the lungs, and the mouth often showed marked results—hernia of cheeks and perhaps dilatation of Steno's duct.

INDUSTRIAL HYGIENE IN THE UNITED STATES

Just as a more precise study of individuals in relation to their occupation leads one to some actual investigation of occupations from a medical standpoint, so does it almost necessarily lead one to the third point of my remarks, namely, the taking of a sociologic as well as a medical interest in the matter. In conclusion, let me emphasize some reasons for more thorough studies of the hygiene of occupations in this country, in order that special provision may be made for the circumstances that exist here. When one considers all the attention that hygienists in nearly every other highly civilized country have given to the study and control of the ill effects of occupations, and when one merely reads over some of the many regulations that have been established abroad to improve conditions, it lowers one's pride to realize that in America the national government has made no noteworthy original studies of the question, and the only government contribution of importance is the recent report from the President's Homes Commission, written by Dr. Kober, in which, however, he was obliged to get his facts not from government investigations, but wholly from other sources. Of the states, Massachusetts is the only one that has conducted an investigation that deserves any special attention, and this was naturally limited in its scope. As to regulations, these are exceedingly few in number and inefficient, except as regards a few striking points such as the regulation, in a limited way, of the hours of work, the danger of accidents, etc. Indeed, in regard to most occupations as they exist in this country, we have no systematic information from either government sources or individuals that would be sufficient to base just and comprehensive laws on. In considering occupations from a legal standpoint, as in using this question in our medical practice, we are in almost all instances dependent chiefly on information that comes from European writings, and conditions are known to be in some instances very different in this country, and they are probably different in numerous instances.

A concrete illustration of this latter point is seen in connection with phosphorus-poisoning. This furnishes, also, a striking illustration of the fact that industries in this country are very frequently controlled by great corporations, while abroad they are still often found to a large extent in the form of small domestic industries. Matchmaking is, in Germany, still largely carried on in little home factories, and when the recent law making it illegal to use the poisonous white or yellow phosphorus was passed it was felt necessary to make this prohibition apply to the home industries, because many of the worst cases of poisoning came from these sources. It was, however, considered necessary at the same time to avoid killing off the little home factories, because of the numbers of people that were engaged in them. Hence a clause was introduced which exempted these little factories from the provisions of the patent on the methods of making safety matches. So different are the conditions in this country that at the present time almost the whole match-making industry is confined to one large corporation, and this concern has so thoroughly recognized the valuable effects of hygiene from both the humane and the economic standpoint and has established such effectual measures that phosphorus-necrosis has almost disappeared in their factories even in those who work with the poisonous forms of phosphorus, a result that at one time was considered impossible to achieve. The concentration of capital that is so remarkable a feature of the industries of this country has, therefore, in this, as well as in some other ways, made our conditions greatly superior to those in most other countries. In many instances, however, it makes them worse, for, if a corporation be rapacious, the larger it is the worse its evil effects. That the conditions are won-

15. De Morbis Artificum Diatriba, 1703.
16. München med. Wchnschr., 1904.

derfully good in individual corporations but astonishingly bad in others, and, further, that there is a sad lack of power to make them good when they are bad, is shown better perhaps than it could be shown by any native studies, through the dispassionate report of a foreigner, Dr. Gallard,[17] who was sent here by the French government to determine what the conditions are in this country as regards industrial hygiene. He speaks with enthusiastic admiration of the remarkable things that certain large concerns have done for their employees; but, on the other hand, he discusses with courteous but severe condemnation some other conditions, and he refers with considerable amazement to the *laissez-faire* attitude of the government and the general public. Especial condemnation is visited on one concern that makes a valuable safety device, but does not use it in the factory where it is made, although it is specially needed there!

There are various other things than those mentioned that make conditions in this country very different from those abroad. Indeed, there are certain occupations that are more or less important as causes of ill health abroad that practically do not exist here, at least in a form to cause the same sort of disease. There are, on the contrary, others that are of importance in this country, but are scarcely touched on in foreign writings.

The much greater use of machinery here than abroad, in replacing hand labor, is an element of much importance. I visited, for instance, a certain paint factory, in investigating some phases of occupational lead-poisoning, and found that only one man was at all seriously exposed to lead. Machinery, indeed, did so much of the work that fewer men were employed in the large factory than at the desks in the offices. In some instances, as in this, the effects of such modern machinery are extremely good. In others they are bad, because they throw an exceptional amount of physical or nervous strain on a few individuals, as, for example, in running some of the more complex textile machines, and any good physical effects of such improvements that may occur are, in this country, too often purely incidental to the commercial value of the changes in technic. The deliberate introduction of such measures because of their hygienic effects has been much more extensively practiced abroad than here. There is in Europe a very much more general requirement of efficient means of ventilating and cleaning working-places and of other important general measures; and also of many special ways of overcoming the particular evils of particular occupations. Power is very frequently given by law to see that these measures are carried out. Furthermore, the frequency with which they offer in several foreign countries such philanthropic measures as providing means for working mothers to nurse suckling infants is admirable, as is the frequency with which they demand less taxing work or entire rest for women in the latter part of pregnancy and in the puerperium.

When contrasted with foreign conditions, our nation seems in many ways to be generations behind numerous other civilized countries. I would have it understood, however, that I do not advocate as the dominant means of overcoming the evils that exist the enactment of special laws. Laws are essential, in order to control those who have neither altruism nor breadth of view; and that they may do great good is seen in the fact that in France they have long had careful regulations governing the manufacture of lead products, with the result that in Paris, one of the two chief centers of the lead industry in that country, the cases of industrial lead-poisoning admitted to hospitals a few years ago averaged only 13 per annum (Gautier), while in Klagenfurt, Austria, also a center of these industries, but in a country where they are essentially uncontrolled, the number of attacks of lead-poisoning in one factory averaged nearly 1½ per annum for each man employed. The justification for laws because of the loss that occurs to the state is seen in the fact that in the one city of Vienna, among the pottery-makers, painters, printers and typesetters, about 45,000 persons in all, and engaged in occupations that by no means head the list in the danger of poisoning that they entail, the annual loss of labor through lead-poisoning alone was over 43,000 working days.[18] In this country this would probably mean at least $100,000 of direct annual loss, besides the confusion and inefficiency lent to the work by constant changes of employees. When one considers that tuberculosis and other diseases that are secondary consequences of the poisoning that occurs in such occupations produce an even greater loss of labor and expense to the state, the economic effects of the evil conditions of occupation and the desirability from the standpoint of the commonwealth and nation that they be lessened become quite apparent.

As a very striking illustration of the influence of laws, I would mention that the English pottery workers showed per annum but 1.5 per cent. of lead poisoning, while the Viennese engaged in the same sort of work showed 34.1 per cent.—a difference that appears to be almost entirely due to the fact that there are no laws controlling this industry in Vienna, while the English laws, particularly in regard to the fritting of the glaze, are strict. Again, Gautier, as I stated, mentions that in Paris, one of the two main centers of the white-lead industry in France, the total number of cases per year of industrial lead-poisoning admitted to hospitals during two years was only 13, owing to their very careful regulation of these industries, while we have had in one hospital in Philadelphia, the Episcopal Hospital, each year many more than this number of cases from one such factory.

APATHY OF THE WORKER

But regulation is not the first, nor is it the only important step. This is especially true for this reason, if for no other: Laws or voluntary altruism may lead employers to make regulations and to provide special hygienic facilities, but the greatest difficulty in many instances is in getting the working people to take precautions intelligently. Even when any time consumed was paid for as if it were labor, I have known employees to object obstinately to regulations demanding bathing, for example; and those who have devoted much time to the study of occupational conditions frequently bewail such difficulties. Employees think the precautionary measures are too much trouble or require too much thought, or they often feel that any regulations interfere with the rights of a free American citizen, or they have other reasons. Very often they object simply because the regulations are new and are against their traditions. This attitude and the selfishness and apathy of some employers can best be overcome by finding out what the exact details of the process are, so far as they affect health, and then pointing out to both employers and employees how these difficulties can be overcome. Employers are very quick to

17. L'hygiène de l'œuvrier aux Etats-Unis, etc., Paris, 1905.

18. Kaup: Gesundheitsgefährliche Industrien, etc., 1903, ed. by Bauer.

see the economic value of hygienic measures if they can be convinced that they actually accomplish results, and especially if it is clear that they are in themselves ultimately accompanied by reduced expense. Suitable laws will come much more quickly and more certainly when there has been accumulated general knowledge of the conditions that actually exist in this country and of the things that are needed in correcting them. This must originate in very large part from physicians, for they alone have frequent occasion to see clearly what the effects are. It is because, with very little effort or expenditure of time, almost every one of us can not only increase the precision of his own clinical methods, but can also contribute to a growth of knowledge that will tend enormously to benefit human kind that it seemed suitable to digress, in this latter portion of my remarks, into matters that are quite as much sociologic as medical.

Original Articles

THE RESPONSIBILITY OF THE PHYSICIAN IN THE CAMPAIGN AGAINST TUBERCULOSIS *

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The subject of tuberculosis has been considered from a great many points of view, but I do not think that the responsibility of the family physician has been sufficiently emphasized. The object of this paper is to bring existing conditions to the attention of this society and to make an appeal for the more faithful recognition of our very great responsibility in the campaign against tuberculosis.

The apathy, indifference, and often hostility, displayed by so many physicians is one of the greatest obstacles to the successful prosecution of the fight against the greatest enemy of the human race.

The public has a right to expect of us that we, individually and collectively, do everything possible to protect it; people are looking to us to devise means to protect them in the home and the workshop; they expect us to instruct them, in our capacity of family physicians, in the means to be employed in its prevention.

The active work of the campaign has been conducted by a few earnest and sincere men, but it has not met the interest and thorough cooperation of the great majority of general practitioners. Unless the profession as a unit support this movement its consummation will be very materially delayed.

We have often failed to recognize the social aspects of the disease. We have not insisted on our patients giving up their work, in the early stages of the disease, before they become incapacitated; we have not pointed out the sound business principle of this course.

We have sent our patients to Colorado and California and other health resorts, without sufficient inquiry into their financial ability to meet the increased expenses in those places; we have encouraged the hope, which few of them realize, that they may find gainful occupation there; the cry has come to us from those places to keep our patients at home, and we must heed it.

Have we realized the possibilities of home treatment? I think not. The essentials of treatment—fresh air, good food and rest—are by no means universally prescribed, but they should be, just as much as quinin in malaria or mercury in syphilis, for they approach nearer to a specific than anything in the Pharmacopeia. It is wonderful what results they will produce in the home of the patient, many times under very unfavorable conditions. We do not allow a typhoid patient to get up until his temperature is normal; then why a tuberculous patient? No objection on the part of the relatives or friends should deter us from insisting on these essentials of treatment.

The responsibility of the physician embraces his obligation to his patient, to society and to the state.

RESPONSIBILITY TO THE PATIENT

As the family physician is generally the first to be consulted, he has the opportunity first presented to him for early diagnosis, and as the subsequent career of his patient, both of health and fortune, depends on the early recognition of the disease, he has a very great responsibility.

A few very important helps to diagnosis are:

1. Careful attention to early symptoms.
2. Thorough physical examination.
3. Examination of sputum.
4. Tuberculin tests.

1. *Careful Attention to Early Symptoms.*—Among these may be mentioned cough, afternoon fever and loss of weight.

Cough is generally the symptom that prompts the patient to seek advice. It may not be constant, but may occur only in the early morning, on rising, or at night. When it occurs in a person previously healthy it should be looked on with suspicion. This symptom should be more seriously considered than it habitually is by a great many men, especially when accompanied by a slight elevation of temperature.

Afternoon fever will not be detected in the early stage, unless it is looked for; therefore the necessity for the use of the clinical thermometer. This simple procedure is frequently neglected. If a slight elevation of temperature is found or suspected it is the proper thing to give the patient a thermometer, with instructions in its use, and have him take his temperature every four hours during the day and keep a record. The great majority of patients will be thoroughly capable and willing to do so, and it will be a great help to diagnosis.

Loss of weight is a very important symptom. The patient should be weighed by the physician himself, so that it is important that the latter have scales in his office. This symptom, associated with cough and afternoon fever, will add another very important link in the evidence.

There are many other important symptoms, which I have not time to consider in detail, such as spitting blood, malaise, fatigue after the usual work, loss of appetite, etc. They should each be carefully considered.

2. *Thorough Physical Examination.*—This cannot be too strongly insisted on. Many early cases are overlooked because the doctor does not remove the patient's shirt. It is absolutely impossible to detect the early physical signs without a careful and thorough examination, which may have to be several times repeated, before definite lesions can be detected.

The physical examination is the most important of all procedures. Although by itself it may leave us in doubt, through physical examination, in association with the symptoms mentioned above, we may be able to arrive at a definite conclusion.

3. *Examination of Sputum.*—Although tubercle bacilli are not found until there has been some destruction of lung tissue, they will often be found very early in the disease, even when the symptoms are slight. When they are found we shall be able to give positive proof of the existence of the disease. They should therefore be sought; still, this simple procedure is neglected by a great many physicians. The city provides a laboratory where the examination is made, yet the number of physicians who availed themselves of this privilege last year was but 393 out of a total of about 1,300 in the city of Baltimore. Allowance must be made for those who do not see tuberculous cases, for those engaged in specialties and for those who have sputum examined elsewhere; still I think it may be safely estimated that 50 per cent. of practitioners do not avail themselves of this privilege. But 1,932 examinations were made in this laboratory in the past year.

Another proof to be kept in mind is that failure to find tubercle bacilli in the sputum does not exclude the possibility of the disease, as they may be absent from the sputum, or they may not be found microscopically. Repeated examinations may be necessary. Their demonstration is positive proof of the existence of tuberculosis, but we should not exclude it when they have not been found.

4. *Tuberculin Diagnosis.*—The diagnosis of tuberculosis by the use of tuberculin is now within the reach of the general practitioner. He may employ the ophthalmic or the skin test, or may use tuberculin subcutaneously. There is no reason why these valuable tests should not be generally adopted, the only precaution necessary being the proper attention to dosage.

It is only by careful attention to all these points that an early diagnosis is possible, one being corroborative of the other.

Another important measure which should be more generally employed is the examination of persons who have been exposed to the disease, either in their own homes or elsewhere. I have on many occasions discovered early cases by this means.

Tell the Patient the Truth.—After we have made a definite diagnosis, it is our duty to tell the patient the whole truth. It will not be so great a shock to him, if we are able to say that the disease is in its early stages, and that proper treatment, adopted at once, will restore him to health, as to wait until the disease has advanced, when he discovers the truth himself, or is told by another physician, and when we cannot honestly give him a favorable prognosis. There is no justifiable excuse for secrecy; the theory that it does the patient harm to know the truth has not been the experience of those who are working in dispensaries and sanitariums. It is impossible to institute proper treatment unless the patient understands the objects to be obtained; consequently those who hide the truth are not giving their patients the full benefit of their knowledge. A patient will not take the proper measures to protect those around him, unless he knows that he has a contagious disease, which he can communicate to them.

A great many doctors consider it poor business policy to tell the patients, as they may lose the patronage of the latter. In this they make a great error, as they will surely lose the patients' confidence and respect; when the truth comes to the patients they are very likely to say that the doctor did not know, or that he deceived them.

It is not sufficient to tell the patient that his lungs are weak, or that he has catarrh of the lung, or that he has a deep-seated cold, which will clear up when warm weather comes, or a great many other indefinite or meaningless terms, which many men do, but they should be told in terms which they understand; the disease should be called consumption. As I said before, it does no harm, and the doctor is saved from subsequent humiliation or abuse.

That the patient is not told the truth is the observation of everyone who has attended many advanced cases. It is a disgrace to the profession when a patient, writing to the public press of his individual experience, relates that he consulted four or five doctors, among them a personal friend, and also visited a dispensary in our city, that none of them told him the truth, and that in consequence he was allowed to subject his family to infection for a considerable length of time, when he should have taken measures to protect them, and should himself have been under proper treatment.

The time is not far distant when the doctor will be held legally responsible when he neglects the proper measures for diagnosis, or hides the truth afterward. I do not think it would be difficult to convince a jury of the doctor's responsibility and liability, if he failed to examine the sputum, when it could be shown that that was all that was necessary for a diagnosis.

Another practice that has been carried on by some is to deny to the patient the existence of tuberculosis, when the latter has been informed, either at the dispensary or by a conscientious physician, the result being that all prophylactic measures were discontinued, the patient given false hope, and the influence of the dispensary decidedly diminished in the neighborhood. Such a case has recently come under my personal observation. Such a practice cannot be too severely censured.

RESPONSIBILITY TO SOCIETY

The further the obligations are removed from the individual the fewer the number of those who appreciate them; consequently a larger number fail in their obligation to society. One of the principal reasons for this is that the individual must often sacrifice his inclination for the good of society. The old Mosaic law which required the leper to cry out "unclean" at the approach of anyone may seem a hardship, but it was the means of preventing the spread among the Jewish nation of a very loathsome disease. We are unwilling to subject our patients to partial or complete isolation, whereas this must become the most effective means in preventing the spread of the disease. We must discourage marriage among consumptives, unless the disease has been arrested for a considerable time. We must prevent a tuberculous mother from nursing her babe, not only because of the ill effects on the mother, but because of the very great danger of infecting the child. We must protect the laundress who washes infected clothing and the woman who cleans the rooms. We should protect the family whose cook has tuberculosis. All these and many other obligations belong to the physician and should be assumed by him.

RESPONSIBILITY TO THE STATE

This requires that the physician fulfil the requirements imposed on him by law. Has he done so? The advantages of registration no longer admit of discussion, and this has been enacted into law. It is therefore the duty of the physician to register his cases as soon as he makes a diagnosis. I cannot see what possible objection he can have to doing so, yet of over 2,200 physicians in this state, only 595 reported one or more cases to the State Board of Health; most of these re-

ported one each, and not more. It may be only fair to state that probably 25 per cent. of the physicians are not in active practice, or may not have tuberculous cases under their care. Assuming that there are 1,600 physicians in active practice in this state (Maryland), who see cases of tuberculosis, but 595 or about 37.5 per cent. are fulfilling the requirements of the law.

These 595 physicians reported 1,483 cases to the State Board of Health, while seventeen dispensaries and hospitals reported 1,130 cases and the tuberculosis nurses reported 870 cases. The Phipps Dispensary alone reported 33 per cent. of all the cases.

Although I have been unable to obtain the exact figures, I think that I am conservative when I state that 90 per cent. of all cases reported to the State Board of Health are in the second or third stage of the disease, and not more than 10 per cent. of early cases. This would indicate that the diagnosis is not made early, or else that the cases are not reported early.

Some men allow their cases to be reported by the dispensary or the nurse, because they do not care to take the time to fill out the very excellent form of instruction required by the state board of health, for which the state allows a fee of $1.50, and which is no more voluminous than that required by every fraternal or beneficial society, and for which he receives a fee of $1.

I wish to make a plea for a more general observance of this requirement. There should also be a more general observance of the law requiring rooms occupied by consumptives to be fumigated when they are vacated either by death or removal. No objection by householder or landlord should deter us from this obligation.

There are several reasons why these conditions exist: (1) incompetency; (2) carelessness; (3) economic considerations. There is no justification for any of these.

1. *Incompetency.*—There are abundant opportunities for every practitioner to acquire sufficient skill in physical diagnosis, if he will avail himself of them; but he need not be a skilled diagnostician; if he will faithfully watch the symptoms mentioned above he will generally be able to make a probable diagnosis. If he be in doubt, consultation is always available.

2. *Carelessness.*—This is thoroughly inexcusable, but may be in a great measure overcome by the adoption of a definite plan of examination, which should be recorded. Such a procedure will require very little time, when once adopted as a habit.

3. *Economic Considerations.*—These are rather more difficult to combat, the enormous increase in the number of practitioners, the multiplication of dispensaries and hospitals, the increased cost of living, the reduction of fees, and many other considerations—all combine to make the practice of medicine less remunerative than formerly, and thus increase the temptation for irregular and unprofessional practice, but, as I have tried to show, even from this standpoint it is a short-sighted policy, that will react to the disadvantage of the one pursuing it.

In conclusion I will appeal to all members of the profession to uphold their traditions for honesty and unselfish devotion to the interest of their patients. I appeal to them to recognize the fact that they are the most important factor in this great campaign, which has just fairly begun, but which gives promise of developing into one of the most popular movements that has ever existed. I appeal to them to recognize their obligations before they are compelled to do so by popular demand.

102 East Twenty-fifth Street.

THE TREATMENT OF CANCER OF THE UTERUS WHEN TOO FAR ADVANCED FOR CURE BY EXTIRPATION OF THE UTERUS *

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Although my primary purpose is to speak of the treatment of inoperable cancer of the uterus, a few words regarding the general subject of uterine cancer may not be out of place.

Most important in this connection, it seems to me, would be the formulation of some plan whereby the number of women hopelessly so afflicted may be lessened. This can be accomplished only by teaching women that there is no one symptom peculiar to cancer alone. While it is true that the disease is more likely to occur about the climacteric period, yet no period of life is exempt from it. Its approach is so insidious that, when symptoms of an alarming nature manifest themselves, the disease is usually so far advanced that it comes under the head of "inoperable cancer." Women must be taught to apply to their physicians on the first manifestation of a pelvic symptom at variance, even though very slightly, with their normal condition; in particular a variation of the menstrual function, including a leucorrheal discharge, and especially if their age be past 40 years; though, let me reiterate, they must be made to realize that no age is exempt from uterine cancer.

In Germany women have been taught by Duehrssen and Winter, especially by the latter, the necessity of early consultation with their physician, when any abnormal symptom presents itself. The teaching by Winter has been through the lay press, with the result that already in many parts of Germany there is a decreased percentage of "inoperable cancer" patients. Physicians, too, have learned the necessity of carefully examining every patient that applies to them with such symptoms, and the wisdom of expert consultation whenever there is question as to the diagnosis. The American conception of what is ethical is somewhat at variance with that of Germany; yet similar methods must be adopted here if we are to gain early practical results. It is for such men as those composing this Section to determine on the best means of diffusing information among women without violating the standard of ethics, and I would earnestly suggest that a committee be appointed to consider this important matter and report its conclusions, with a view to letting the main body of the Association take such action as may be most useful to womankind, and at the same time strictly ethical.

I am convinced that only by such means can we hope to lessen the mortality from cancer of the uterus, and that the early recognition of the disease, followed by prompt proper intervention—not the very extensive abdominal operations now practiced by many, particularly in Germany—will prove an important agency in decreasing the death rate from this malady.

Since the revival of the abdominal route for the extirpation of cancerous uteri, and the employment of the modified paravaginal section for extirpation by the vaginal route, the number of patients left to die of the disease without any surgical attempt at cure has been lessened. Nevertheless there is a large number of women for whom nothing can be done, save palliative treatment.

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

It is unfortunate that women with inoperable uterine cancer should be undesirable patients at most hospitals, for proper hospital care is fully as necessary to these unfortunates as to those still in a condition permitting of an attempt at radical removal of the disease by surgical intervention. It is, indeed, pitiful to see how little is done to mitigate the misery of these sufferers; how frequently every shadow of hope is taken from them by some unfeeling person—very often the physician—who does not withhold the truth as to their condition.

The palliative treatment of cancer becomes especially important when we recall that, by preventing the nutrition of the cancer cells, we cause them to undergo retrograde metamorphosis and thus destroy their activity. We know from the experience of the late John Byrne

Fig. 1.—Heavy curette or "cancer spoon" for scraping a carcinomatous uterus.

and many others, myself among them, that even in carcinomatous uteri of long standing the further progress of the disease may be checked by proper heat application. It has been asserted by some, particularly by Byrne, that cures even have been brought about by such means, the cancer cell having very little power of resistance against heat. The late Lawson Tait asserted that he had seen some spontaneous cures of cancer. I myself saw such an instance: a pathologist of international repute had made the positive diagnosis of cancer, and so far as the macroscopic appearance of the tumor went, his opinion seemed correct. When a few years later the woman died of some ailment of a different nature, the postmortem failed to show evidence of the tumor found by me at the time of making the abdominal section. The carcinomatous structure had disappeared. This observation, personally made, would have a tendency to verify the statement of Lawton Tait, that an exploratory abdominal section, in some instances, suffices to bring about a cure of intra-abdominal cancer. In addition to the case verified by the report of a prominent pathologist, I saw another tumor, which, from its macroscopic appearance and from the clinical course of the patient prior to the doing of the abdominal section, was likewise an inoperable cancer. Not only I, but Drs. John Wyeth and Sims, who were present at the time the exploration was made, thought that the tumor, for the purposed extirpation of which the exploration was made, was a carcinoma. The abdomen was closed, and then, for more than ten years, I observed the woman. The tumor gradually disappeared, and three years later not a vestige of it could be felt. Moreover, the woman, who was emaciated at the time of operation, became robust, the picture of health, without further treatment. The family had been told, after the exploratory operation, that the patient would probably die within a year from the cancer which, even before the abdomen was opened, was thought to be present. Inasmuch as no histologic report from an excised piece of the neoplasm was obtained in this instance the clinical diagnosis lacks confirmation by the microscope. There can be no question, however, that the system, under some circumstances, checks the proliferation of cancer cells and occasionally succeeds in destroying their life

Czerny[1] reports an instance of "inoperable" cancer of the vaginal part of the cervix, for which a palliative operation was done. Re-examination of the patient, five years and three months later, showed her to be absolutely cured. He mentions several other instances of spontaneous cure of cancer.

Lomer,[2] of Hamburg, in his article on the curability of carcinoma, also quotes cases of similar cure.

Chrobak[3] has observed a number of patients on whom palliative operations were done, with entire recovery following.

It seems certain that small cancer remnants left in the body are sometimes taken care of by the system. What the conditions are in such instances no one has yet determined. An example illustrating this was the case of an incipient cancer of the tongue, for which I operated in association with the late William T. Bull in 1888, when I was still doing general surgery. The clinical diagnosis was verified by the microscope, and it seemed later from the macroscopic appearance of the tongue, and also from a microscopic examination from the edges of the specimen removed, that a small remnant was left behind; yet the patient eventually made a good recovery, and five years later was living without evidence of the disease.

Clinical experience has shown beyond doubt that palliative treatment may benefit cancer patients by directly destroying the cancer cells with the agent used, and perhaps by forming a protection against the cancer proliferation.

As to palliative treatment by surgical means, the disease in some instances has advanced too far even to allow such a course to be considered, because its application might—yes, in all probability would—leave the

Fig. 2.—Metal speculum with double hull, for use in cauterizing the uterus.

patient in a worse condition than before the intervention. We know that in young persons especially the neoplasms grow rapidly, so that the nutrition of the tumor does not keep pace with its rapid growth. The result is that the central part of the tumor breaks down because of the sparsity of blood vessels there. Hence the destruction may have proceeded so far as to make it hazardous for us to use proper energetic surgical means to correct the symptoms caused by the breaking down of the new growth, because of the danger of injury to the bladder or the rectum.

Some surgeons have gone so far as to assert that a refusal to do a radical operation for cancer of the uterus is justifiable only after an exploratory abdominal section has shown it to be impossible, except in those cases in which it is obvious that the bladder or the rectum is

1. Czerny: Unerwartete Krebsheilungen, Ztschr. f. Krebsforsch., v, 28.
2. Lomer, R.: Zur Frage der Heilbarkeit des Carcinoms, Ztschr. f. Geburtsh. u. Gynäk., 1903, l, 305-384.
3. Chrobak, R.: Zur Behandlung des inoperablen Uteruskarzinoms Wiener klin. Wchnschr., 1905, No. 38.

already affected. I confess that I consider this going too far, for, while we may still be able to complete the operation, I can not conceive what the patient is to gain, even if she does recover primarily. I look on an operation simply as a surgical possibility when uterine cancer has passed beyond the boundaries of the uterus to such an extent that palpation can readily show that it has done so. I prefer to resort to a palliative operation with a curette and a cautery under such circumstances, and I believe that the results are just as satisfactory as to the longevity of the patient, and far better as to immediate mortality; for the curette and cautery operation should cause no deaths directly, unless from the anesthetic.

Before beginning the surgical intervention with a curette and a cautery, a careful examination is essential to determine, as nearly as possible, to what extent the neoplasm has progressed. For this purpose a cystoscopic examination of the bladder is important. If the mucosa be found very edematous, or other evidence of inflammation be present, it is obvious that the neoplasm is approaching the bladder, and one must then be very careful in one's subsequent work. If the vagina be extensively infiltrated by the cancerous growth, it is inadvisable to do anything with the curette and the cautery.

I have had a specially heavy curette constructed for doing the scraping as expeditiously as possible. I have named it the "cancer spoon" to distinguish it from the smaller forms of spoons and curettes generally in use. Such a large instrument has an additional advantage; one is not so likely to perforate into the peritoneal cavity as with the ordinary small curette. All readily breaking-down structure is rapidly excavated with the spoon. The bleeding is stopped with an extra large dome-point electrode of a galvanocautery, so that it can be done more rapidly. To avoid burning the vulva and the vagina, I devised a speculum a few years ago which is constructed of metal and has a double hull, cooled by a continuous flow of cold water through the dividing space. In shape it is like the old style Ferguson speculum. The burning or charring is done very thoroughly, so as to leave practically only an outer shell of the uterus. The operation must be controlled by frequent examinations with the finger, lest we perforate the uterus and injure other structures. This has happened with me but once when using the cautery, though it occurred several times while doing the excavating with the style of spoons and curettes generally used. On these occasions I immediately ceased the operation, and no harm resulted. With the large spoon now used by me I have never broken through the uterus. It is well, now and then, to cool off the cavity which is being charred. This is easily done by putting ice shavings, or very small pieces of cracked ice, through the speculum, leaving them for a few minutes and then drying the surface before again applying the heat. Before the cooling speculum was devised I used vaginal retractors, wrapped with gauze wrung out in ice-water; yet this did not prevent occasional burns. With the cooling speculum, burns are entirely obviated.

After the eschar has been thrown off, it is best to use strong tincture of iodin in the cavity once every second day until the cavity has contracted. Or, judging from Gellhorn's experience with acetone, that remedy might be used with even greater benefit to the patient following the casting off of the eschar. Once I saw a fatal secondary result from the treatment. After the eschar was thrown off, a branch of the uterine artery began to bleed. I was called to see the woman in the middle of the night. The artery could be seen spurting. The cavity was tightly tamponed, but this did not stop the bleeding. By the time I saw the woman again, after returning home and preparing myself more energetically to control the hemorrhage, she had lost so much blood that she died of acute anemia. While it is asserted that patients have been cured by such treatment, I can not verify such results among patients observed by myself. I have seen, however, a number of patients whose lives were prolonged three years and more, and who were made comfortable for that period. It has been my custom to repeat the cauterization whenever necessary; i. e., when even a little bleeding showed itself, or if there was evidence of softening of the diseased uterine structure. I have recauterized some patients six times, and oftener, during three or four years.

A Paquelin cautery, a galvanocautery put in operation by a battery, or the old style "hot iron," are not so serviceable for this work as is the heating of the electrodes by the direct, or by the alternating current supplied for lighting purposes. I know of no method of treatment that will control the two symptoms, bleeding and offensive discharge, so satisfactorily as that of excavation and cautery.

The late Marion Sims used strong chlorid of zinc solution for this purpose. The objection to this procedure is that one can not know in advance how deep the destructive process of concentrated solutions of chlorid of zinc may go. In one instance that I have observed it went to such depth that the slough caused both a vesicovaginal fistula and a fecal fistula. It has been asserted that deep destructive action can be avoided by not allowing the tampon which is impregnated with the solution to remain for more than a day, or even for so long. I have found it very difficult to remove such a tampon until it has become loosened by the chlorid of zinc slough being ready to be cast off spontaneously. Indeed, I have found it impossible without causing so much traumatism to the underlying tissue that profuse bleeding must result. More important, however, is the question: If the full action of the medicament is not taken advantage of, why use it at all? Furthermore, despite the precautions that one may take by employing bicarbonate of soda, according to the directions laid down by Sims, I have never seen an instance in which the cauterizing effects of the zinc did not occur on parts other than those for which it was intended, and particularly in the vagina.

Carbid of calcium was also used on a number of patients many years ago, but, like other agents of supposed curative value, it proved a complete failure in my hands. Moreover, its caustic action is fully as intense on parts where it is not desired as is that of strong chlorid of zinc solution; and I know of no way to prevent this.

Several years ago, when the treatment of inoperable cancer with pyoktanin became known, through the late Mosetig-Moorhof, I used this remedy very extensively, and believed that, in some cases, I observed good results. A continuance of the observations made, however, proved my conclusions fallacious. Undoubtedly now and then a patient is benefited by the injections into the tumor, so far as the local condition is concerned, but the improvement is not permanent. This applies also to the injections with absolute alcohol, for which, for a short time, extravagant claims were made.

Some surgeons assert that the chemical destruction of the new growth is far superior to the destruction by means of a curette and cautery. I have made painstaking studies on this point, and am of the opinion that, if a patient is still in a condition for the application of such direct surgical methods as the curette and cautery operation, they afford the best palliative means at our disposal.

After cauterization has been completed, nothing further is necessary until the eschar begins to slough and excretions from the wound begin. Then the treatment with tincture of iodin, or with acetone, as advocated by Dr. Gellhorn, should be begun. After applying the iodin, it is best to put a tampon of absorbent cotton or sterile gauze into the cavity, so as to get it dry after treatment. The use of vaginal douches, so frequently employed to overcome discharge and to keep the patient clean, should be prohibited.

Gellhorn, of St. Louis, has published an article[4] which seems to be of value. He utilized the laboratory observations of the effect of acetone in a practical way on cancer of the uterus. He claims for it that it hardens the tissues. His method is as follows:

The new growth should be excavated as thoroughly as possible, and then the acetone applied through a Ferguson speculum. The pelvis should be elevated and the solution poured into the speculum. Care should be taken not to allow the acetone to come in contact with the external genitals. The surplus of acetone, after the remedy has remained in contact with the raw surface for from fifteen to thirty minutes should be absorbed with cotton. The treatment should be repeated every two or three days. Gellhorn maintains that this invariably relieves the patients of the main symptoms.

An analysis of the results with trypsin treatment does not seem to me to make it desirable to give trypsin a prominent place.

Fulguration is one of the latest therapeutic agents employed in the treatment of cancer. Czerny[5] asserts that if all the carcinomatous structure can be made accessible to fulguration the cancer may be cured, because fulguration does destroy the cancer cells. The "dose" of fulguration may be administered with exactness, and the treatment by the method is elective. With the patient under the influence of narcosis, fulguration may be applied for an hour, then the exposed cancer area may be excavated, and the wound surface again fulgurated for from ten to fifteen minutes. Wonderful therapeutic results are claimed for the treatment, which was first described by Keating Hart, of Marseilles.

As with all new remedies, one is apt to become overenthusiastic; I have so often been compelled to recede from an expressed opinion that I now believe it safer to test a remedy thoroughly before endorsing it.

This much we may say from accumulated experience: If in young persons with cancer beginning in the cervical canal the disease has perceptibly progressed beyond the line of so-called operability, life is not long to be enjoyed, no matter which of the palliative forms of treatment at present known to us is employed.

It may be that in the future a valuable therapeutic agent will be found in the ferments, judging from the results obtained by the injection of placenta ferment; but at present it is too early to be sanguine. This is said because we have been disappointed in every instance in which we were led to hope, from the claims made, that we had at last in our possession a remedy that would cure cancer of the uterus. I call attention only to a few of the more prominent ones: the Roentgen rays, radium, trypsin, etc.

The work of Professor Bier[6] is exceedingly interesting. Bier began his experiments—the injection of blood of a different species into malignant tumors—and published his investigations[7] in 1901. His object was to cause an artificial inflammation with an elevation of temperature and thus demonstrate that inflammation and fever were associated, especially so far as concerned the chemical process. He selected defibrinated blood from swine for his experiments, because hog's blood causes, when injected into cancerous, or into sarcomatous tumors, decided local and general manifestations. When 10 to 20 c.c. of such blood are subcutaneously injected, invariably, after the lapse of several hours, an inflammation is caused at the point of injection. This attains its maximum degree of severity in from one to three days. Then it gradually subsides. On repetition of the injection with such different blood the reaction is caused by a smaller quantity.

From lamb's blood, used by Bier in other diseases, a much milder reaction resulted. Never having observed any permanent ill effects from such injections, he believes them the safest method of producing fever and local inflammation. While the defibrinated blood does not contain leucocytes, these are supplied in abundance by the body of the recipient of the blood. Such blood does not seem to have any influence on normal tissues.

The action of the blood on tumors varies. Almost invariably, in suppurating carcinomata, the secretions are diminished. On existing pain, caused by the tumor, it does not seem to have marked influence. The growth of carcinomatous neoplasms is not noticeably influenced. The experiments are still being continued.

Though we know that women with inoperable carcinoma of the uterus have been kept alive for many years, apparently entirely cured, we can not be absolutely certain that there are not within the body some remaining cancer cells with latent avidity. I believe the recurrences after five years and more that have been reported from time to time may thus be explained. In other instances, it is likely that the diagnosis of carcinoma lacked verification under the microscope by a competent pathologist. To my personal knowledge, several such patients have been reported as cured by palliative treatment.

The pain that is caused by pressure of the tumor on nerves must be combated with narcotics. Of these, opium and its alkaloids are the only ones that give entire satisfaction. A number of substitutes have been proposed, with the assertion that they act equally well or even better; but none of them has stood the test. I do not hesitate to confess that I am an advocate of euthanasia in the case of such patients, if the giving of relief from pain by the administration of remedies that we are sure will give such relief can be so called. One should begin with as small a dose of morphin as is sufficient to relieve a patient, and then not repeat it oftener than necessary. The dose must be increased later, and the intervals of administration shortened. I have had patients who required five grains of morphin

4. Gellhorn, George: A New Mode of Treatment for Inoperable Cancer of the Uterus by Means of Acetone, THE JOURNAL A. M. A., 1907, xlviii, 1400.

5. Czerny: Ueber die Blitzbehandlung der Krebse, München med. Wchnschr., Feb. 11, 1908.

6. Bier, August: Beeinflussung bösartiger Geschwülste durch Einspritzung von artfremden Blut, Deutsch. med. Wchnschr., 1907, No. 29, 1161.

7. München. med. Wchnschr., 1901, No. 15.

at intervals of from three to four hours in the last stages of the disease, if they were not more or less uremic.

In summing up, allow me to repeat that we must formulate a plan whereby we can teach women, not singly here and there, but in the mass, and in an ethical way, the insidiousness of the onset of cancer of the uterus; the necessity of consulting a physician on the first manifestation of any abnormal pelvic symptom; and the fallacy of the view that cancer occurs only at the climacteric period.

Physicians must accept the responsibility of letting no question in diagnosis remain unanswered. If they can not themselves make a positive diagnosis, they should ask aid of those who can.

39 East Sixty-first Street.

THE PALLIATIVE TREATMENT OF CANCER OF THE UTERUS ESPECIALLY WITH THE THERMOCAUTERY *

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As a preliminary to this paper I wish to state, in the most unequivocal terms, that the palliative treatment herein recommended is not advocated as a substitute for the early extirpation of the diseased structures by appropriate surgical procedure, but that it is applicable to cases in which the time has passed for such treatment, and also in certain cases in which the consent of the patient can not be obtained for early hysterectomy, who will accept a cautery operation as an alternative; neither is it my purpose to inquire into the etiology of the disease or review the literature of the subject, but to study it chiefly from the clinical point of view, with the reference to the one topic of palliation.

The prophylaxis of smallpox by vaccination, the curability of diphtheria by antitoxin, the relief of epidemic cerebrospinal meningitis by Flexner's serum, and the cure of certain cases of septicemia by antistreptococcus serum, have marked epochs in medical progress. Just at present the professional mind is focused on the preventability and curability of tuberculosis, with results which must count for a lessened mortality and increase in average longevity, with a corresponding freedom from avoidable invalidism and suffering.

The advocates of preventive medicine are engaged, in no small measure, in the efforts to discover the cause and cure of cancer; but the cause has so far escaped observation; and it is painfully evident that early radical measures have about reached the limit of their curative efficiency. It must be apparent, however, to the scientific and humane practitioner that the palliative treatment of uterine cancer is not receiving that attention which the subject demands, and it is to this aspect of the problem to which I ask your considerate hearing.

In 1903 I presented a paper on this subject to the American Association of Obstetricians and Gynecologists, while on previous and subsequent occasions I have called the attention of the profession to the appropriate treatment of these most unfortunate and neglected patients, and in what I shall say on this occasion I shall quote freely from that paper.

I count myself fortunate in presenting this topic for your consideration to-day, not alone from the distinguished character of this representative body, but for the larger opportunity it affords of reaching so great a number of the medical profession, in the hope that these suggestions will stimulate a renewed effort for the relief of a large class of unfortunate sufferers.

What I have to say will treat more of cancer of the cervix than of cancer of the body of the uterus, though in principle it applies to both. The specific indications for treatment will depend on the local involvement and the extent of tissue destruction; the end to be attained is to get rid of all diseased structures possible. When the disease has passed beyond the cervix, involving the bladder, the broad ligaments, and adjacent structures, it may be advisable to limit the treatment to the superficial area of ulceration. The cautery or caustic applications which result in opening into the bladder or rectum or which involve the pelvic viscera are to be avoided. The important problem is usually the exercise of that judgment which decides the conservative limit of approach and that skill which renders such effort availing.

After long personal observation and experience, I am convinced that no palliative treatment is at once so simple and effective as the thermocautery; and one advantage it has over all other methods resides in the fact that it effectively closes the lymphatic vessels, as is noticed in thermocautery operations elsewhere, notably in operations for hemorrhoids.

A well-equipped galvanocautery plant for hospital work leaves nothing to be desired; and as between a portable galvanocautery apparatus and a Paquelin cautery for non-hospital cases circumstance will decide. Those who attempt the operation with one apparatus will not infrequently regret another had not been supplied. Whether the superiority of the thermocautery over caustics is due to the influence of heat on the diseased cells beyond the area of cell destruction is a matter of opinion, but, in view of the better clinical results of the former, the deduction suggested is altogether logical and probable. To meet the varying indications a variety of platinum knives and electrodes are necessary.

I desire to give special emphasis to the fact that it is quite exceptional for the patient to suffer pain after the use of the thermocautery, provided, however, the mucocutaneous surfaces are not seared or burned. This requires tact and experience. I have usually found it easy to protect the vaginal surfaces from the injurious heat of the cautery by the use of strips of asbestos paper of proper size and shape. Where large areas of ulceration are present the curette may first be used to advantage. This is likely to result in pretty active hemorrhage. This bleeding is usually easily controlled by the application of pledgets of cotton applied with pressure, first dipped in dilute acetic acid, usually of half strength, or by the use of the adrenalin chlorid. After this, the cautery knife is to be applied at a dull red heat until the surfaces are thoroughly charred. The after-dressing consists of 5 per cent. iodoform gauze, reapplied daily, after cleaning the parts with liquor cresolis compositus or permanganate solution douches. The use of peroxid of hydrogen is likely to provoke hemorrhage.

To Dr. John Byrne, of Brooklyn, recently deceased, the professions are indebted to an elaboration of the correct use of the galvanocautery. His method of operation in cancer of the cervix was to introduce, well up into

* Read in the Section on Obstetrics and Diseases of Women of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

the cervical canal, an expanding double tenaculum forceps that when opened held so firmly that any practical degree of traction could be made. A circular fissure, close to the vaginal junction, was then made for the reception of a platinum wire loop. By continued traction while this wire was slowly eating its way through the structures the entire cervix was removed. His next step was to use a sharp curette within the whole area of the uterine cavity. This afforded sufficient space for the introduction of another electrode, having a larger cauterizing surface, going over this entire surface. The cavity was then sponged dry and a tampon soaked in acetic acid and tannin applied, and the parts made dry; after which a dome-shaped cautery instrument brought to a cherry-red heat was slowly applied to this whole area until the parts were completely charred and black. By proper application of this thermocautery nearly the entire uterine structure is destroyed, save a shell of tissue and the peritoneal covering.

It was by his skill and persistency that the efficacy of the galvanocautery was established on a solid basis. The skill in the use of the thermocautery was, first, in not going far beyond the area of involvement, and, second, in having the cautery knife hot enough to burn the structures and not hot enough to disintegrate them too rapidly. If the proper heat is not maintained, troublesome hemorrhage may follow. I have seen patients far advanced with cancer of the cervix and uterine body, showing signs of grave systemic infection, who lost their cachectic appearance after thermocautery operations.

The primary objection to the powerful escharotics like mineral acids, caustic potash, etc., is the difficulty, if not the impossibility, of gauging their corrosive action, the pain of which is often atrocious and far greater than that of the thermocautery.

Daily vaginal douches with permanganate of potassium or compound solution of cresol are the best antiseptics. In all manipulations of the parts subsequent to the operation the greatest gentleness should be observed. Generally the use of bivalve speculum should be avoided, as it is likely to impinge on this area. Usually the dressing is best accomplished by having the patient in the Sims position and by using a medium-sized or small Sims speculum. Mention should be made of the utility of oxid of zinc, carbolized, or iodoform gauze. The slough separates usually in from one to two weeks. Daily dressing must be faithfully applied every day until healing follows, or, should it not follow, its use must be continued to keep the parts as aseptic as possible. Where healing is imperfect, and unhealthy granulations reappear, they may be touched with carbolic acid or silver nitrate, pure or diluted as the case may indicate. As in granular surfaces, generally the recognized healing power of silver nitrate must not be forgotten.

In cases in which healing does not follow, or in which the disease returns, the acrid discharge is a prominent factor in the production of pain, and it goes without saying that local cleanliness and disinfection are constantly required.

In hopeless cases this local treatment is a *sine qua non* for the patient's comfort; and it is at this point in the history of many patients that the failure to give relief occurs. It is possible in some instances to train an intelligent nurse to do the dressing, but the skilled hand of the attending physician is most satisfactory. It takes time and patience, but the careful expenditure of both gives the largest degree of comfort and the pain is reduced to the minimum. Sometimes the patient experiences much relief from the local use of cocain, frequently repeated. Not infrequently rectal suppositories containing two grains or more of codein and three of extract of hyoscyamus add materially to the relief of the pain. Later on morphin sulphate in increasing doses may be required to minimize suffering. If this is not well borne the deodorized tincture of opium may be substituted. Again I reiterate the necessity of constant cleansing of the parts, by skilled hands, as indispensable to greatest relief from suffering.

I can not speak from the magnitude of experience which Dr. Byrne presented in his paper to the American Gynecological Society several years ago, in which he stated that he had never known a recurrence of the disease at the part from which it had been thus removed, but that it had reappeared in the fundus, ovaries, or some adjacent structure. In this I have not been so fortunate, owing perhaps to technic less perfect than his. By this method in the report referred to Dr. Byrne operated on 367 patients with cancer of the uterus, of whom at the end of five years 19 per cent. were still alive. This is the most remarkable, as he operated in every case which presented itself, without a single primary mortality. Taking this fact into account, his statistics show most remarkable results, for probably the statistics of no other operator include the cases of so-called inoperable cancer.

The conjecture—well founded in regard to some later ones—that statistics are too often a medium for personal exploitation rather than a scientific record of actual events in support of their authors' declarations, can not be entertained by those who knew Dr. Byrne personally, in regard to his statistics, which are open to no such suspicion or doubt, and are entitled to the confidence of the profession.

There is, it should be mentioned, no reason why in recurrent cases the thermocautery can not be repeatedly applied with benefit. It should be mentioned that at the time these several cases reported came under observation the disease was so far advanced as to leave no doubt of its malignancy.

I regret that want of time prevents more than passing notice of the utility of *x*-ray and radium treatment in uterine cancer. My use of either has not been sufficiently extensive to enable me to speak authoritatively as to their value. So far as my experience goes I regard the radium as far the more useful, in that granulating surfaces take on more healthful activity after its use than that which follows the use of the *x*-ray, and this is, I believe, in keeping with the recent observations. As illustrative of the results of palliative treatment I report briefly the following cases:

CASE 1.—The patient, a married woman, aged 43, entered the Skene Sanitarium, in March, 1901, with a cauliflower excrescence of the cervix as large as a man's fist. She had had numerous conceptions, all of which terminated in miscarriage; but as these were intentionally procured there was a well-grounded suspicion that her disease was related to the incident traumatism. This growth was reflected on the vaginal wall anteroposteriorly and laterally, which forbade a primary effort at hysterectomy. On March 14 I removed the growth by the galvanocautery and amputated the cervix at the vaginal junction. The surfaces healed kindly, save a small area on the uterine stump about the size of a silver half-dollar. On May 21, following, the patient re-entered the sanitarium and I performed an abdominal hysterectomy. Prior to this operation she was weak, anemic and in poor physical condition. Her convalescence was satisfactory. She was kept under monthly observation by her physician, and in May, 1902, a year later, there appeared at the seat of the vaginal cicatrix a nodular mass rather larger than a silver twenty-five-cent piece. At this time she entered the Memorial Hospital and I removed a but-

ton of structure, opening from the vagina into the peritoneal cavity, the size of a silver half dollar. I examined her during the past year and she is in perfect health, with no sign of the return of the growth.

CASE 2.—The patient, a married woman, aged 46, German, multipara, dated her trouble to a miscarriage seventeen years previously. She had a large, bleeding, ulcerating cauliflower excrescence of the cervix, extending to the vaginal walls, which nearly filled the vagina. The discharge was offensive and the patient's health was seriously impaired from the frequent hemorrhages, associated with marked cachexia. She entered the Memorial Hospital Sept. 23, 1902, and on the 25th I removed the entire growth by the thermocautery. In two months' time it had healed under daily dressings, save for a cup-shaped cavity three-quarters of an inch in diameter and one-half inch deep. The patient's general health was greatly improved. Owing to non-healing she had two more thermocautery operations in November, 1902, and June, 1903. In November, 1903, the disease having made some progress without materially affecting the patient's general health, Roentgen ray apparatus was installed in the home and on every second or third day for nearly three months treatment was given. This was followed by the use of radium and the ulcerative process was greatly retarded, and the patients general health fairly maintained with but slight pain, up to the time of her death, May 7, 1904. For several weeks previous to her death the normal anatomic relations between the vagina, bladder and rectum were altogether lost and the amount of gauze daily used to fill this cavity amounted to many yards. During the twenty-one months of attendance the patient was visited by myself or my assistants about 750 times. It is at once apparent that such attention is most exacting in its demands on the attendant, but it demonstrated the fact that almost entire freedom from pain was the result, and that it was worth all it cost.

CASE 3.—The patient, a married woman, German, multipara, entered the Memorial Hospital in September, 1902, with carcinoma of the cervix. The typical symptoms of malignancy were in evidence. I did a high thermocautery operation, entering well up into the uterine cavity, which was unexpectedly followed by prompt healing. About four years ago the patient was in excellent health locally and generally; since that time I have lost track of her owing to the absence of her physician, Dr. Frederick A. Cook.

CASE 4.—During March, 1896, a married woman, multipara, aged 42, came under my observation with typical cancer of the cervix, accompanied with extensive involvement. Hemorrhage was violent and the patient was cachectic. She was greatly exsanguinated and very weak. She entered St. John's Hospital in March, and I did a high galvanocautery amputation as soon as her health permitted. She made a slow but satisfactory recovery, as far as the healing and local symptoms were concerned, and after two or three months she was able to resume her family duties. In November of the same year she entered the Bushwick Hospital for extirpation of a large gland of Bartholin. At this time there was no sign of return of the cancerous growth. On June 16, 1897, she re-entered the Bushwick Hospital, being seven months pregnant. The disease had returned, springing up around the old stump. After watching its behavior, I feared, from the hardening and infiltration of the uterine and contiguous structures, labor might induce rupture of the uterus, and on July 18, at the eighth month of pregnancy, I removed the diseased growth, which encircled the uterine outlet, by the thermocautery. No shock followed and the patient was delivered of a healthy living child on August 6. Her convalescence from the confinement was satisfactory, as was the healing after the cautery. She enjoyed good health for nearly a year. Then the growth reappeared and she entered the Central Hospital, June 21, 1898, and I removed as far as possible the cancerous mass which had returned. She returned home August 25. The healing was not satisfactory and she died a few weeks later from cerebral embolism, which only anticipated the inevitable results of her condition.

In the cases reported, ultimate recovery from the disease was not expected, and no promise of cure was held out to the patients. Patients 1 and 3, after periods from four to eight years, according to accepted standards, were cured. Patients 2 and 4 were greatly benefited and their lives were prolonged for years with very little suffering—a result unattainable so far as I know by any other method of treatment.

In view of these results, I appeal to the members of this Association, and to the medical profession everywhere, not to allow these cases of so-called inoperable cancer to go on without an honest effort to afford relief by the means herein recommended; these efforts will, I am convinced, be appreciated alike by the sufferer and her friends, will give the physician the sense of obligation and duty discharged, and perchance save some life to happiness and usefulness.

1050 Park Place.

ABSTRACT OF DISCUSSION

ON PAPERS OF DRS. BOLDT AND CHASE

DR. G. BETTON MASSEY, Philadelphia: I hope that within five years, as the undesirability of stimulating cancer tissue by traumatism is fully appreciated, we will see the end of cutting into the tissue itself, whether by the sharp curette or the knife. I protest against the curette in living cancer tissue as productive of regional and distant metastases. The tributes to the late Dr. Byrne in the papers on the thermocautery are pleasing and indicate progress in the right direction. While the thermocautery in cancer of the cervix represents improvement on previous procedures there are three practical objections to it: 1. The difficulty in avoiding accidental burning of the vagina. 2. The difficulty in maintaining a sufficiently high heat at the tip of the instrument. The loop must be heavy and the chances are that most of the heat is expended at the proximal end of the loop rather than at the tip, where the disease is most virulent, thus rendering the destruction of the actively-growing periphery uncertain. 3. The third objection is the horrible odor emanating from the slough during its separation, compared with the slight odor from sloughs produced by the electrosurgical use of zinc mercury ions. All these difficulties are avoided by the use of the electrochemical method, the technical details of which may be briefly stated as follows: With the patient in either the dorsal or Sims' position, and reclining on a large, moist kaolin pad, slender zinc needles of sufficient length and insulated to within 2 cm. of the tip are amalgamated and inserted in the diseased tissue and a current of 100 milliamperes turned on and maintained for thirty minutes. As the zinc-mercury points are connected with the positive pole the tips are dissolved and the two metals, in the form of ions, are driven into chemical combination, with the cancerous tissue, devitalizing and sterilizing it. The applications are repeated daily, being well-borne without anesthesia other than a possible dose of morphin, until a total current of 1,000 milliamperes has been employed for an hour, or the tissue seems free of the living growth, when they are intermitted for three or four weeks to permit the sloughs to separate. The best results are secured in the earliest cases, and in patients who are carefully watched for years afterwards and replaced under the method on the slightest evidence of abnormal conditions.

DR. J. H. CARSTENS, Detroit: The only difference virtually between my treatment and that of Dr. Chase is that I do not, as a rule, use the galvanocautery, but use chlorid of zinc, which I think accomplishes identically the same results. I teach the general practitioner, especially the practitioner from the country, to watch these cases, examine them every two or three weeks, and on the appearance of a little raw spot and the recurrence of the growth, it may be only the size of a pea, to remove it immediately and put in a wad of cotton with a saturated solution of zinc chlorid so that it will be cauterized, and this should be repeated when necessary. Of course, the cancer that is inside and is not ulcerated does not produce the serious results that we get from the ulcerated condition. The physician curettes thoroughly, cleans and cauterizes, or uses the *x*-ray, and the woman thinks for six months that she is well. Then there will be recurrence. Last

year at the meeting of the Michigan State Medical Society I read a paper urging that a circular be issued by the state board of health on what women in the "cancer age" should know about cancer. A few of the things suggested were that a woman who was flowing more than usual was in a suspicious condition; that a woman who had a discharge at that time was in need of examination; that a woman who had a discharge which became irritating ought to be thoroughly examined. The circular should be small, just about ten lines. It must be short, otherwise, women will not read it. The State Board of Health has agreed to issue such a circular. It will be furnished to all the county societies so that all the physicians can distribute them. I furthermore suggested that cancer be taken up in the same way as has tuberculosis; and that every year, on a certain day in the year, there be what may be called "cancer day," when the people shall talk about cancer, and the symptoms of cancer, and every paper in the state shall publish an article on cancer. In this way I believe women would be led to consult their physicians before the condition was past hope.

DR. C. C. FREDERICK, Buffalo: I have had some experiences which have been very satisfactory and which lead me to emphasize the points brought out by Dr. Boldt and Dr. Chase in the effort to stimulate general practitioners to make an effort at palliative treatment in inoperable cases of cancer of the uterus, and with the idea of lengthening the days and of securing some comfort for these poor unfortunates. I believe that no cancer of the cervix which has gone beyond the limits of the body of the uterus ought to be subjected to attempts at radical removal because it is futile. But the use of the curette and the cautery does do a great deal for these patients and some of them are cured. The patients will get rid of the infection which occurs; their appetites will improve, the anemia disappear, and for a time they will think they are well, and then they will go down again. To prevent them going down so rapidly the curette and cautery should be used every two or three months. In other words, the patient should be watched and the treatment repeated. I have two patients whom I consider cured. In one, a woman with inoperable cancer of the cervix, the disease occurred twelve years ago. I opened the abdomen with the idea of removing the uterus, but found that there was involvement at the vesicoperitoneal fold, and as she had been bleeding a good deal I tied both uterine arteries and closed the abdomen. I scraped out the cervix and used a cautery. She recovered, and to my astonishment that woman is living to-day. There is a hard cicatricial mass present, but she says that she is absolutely well. I cauterized her only once. What the cautery did and the tying off of the arteries in conjunction with the cautery I do not know. I suppose there was a diminution of the blood supply preventing the further growth of the carcinoma. I have another patient, treated similarly, minus tying the uterine arteries, four years ago last September. I cauterized and curetted the woman four times in the course of the year. The cervix contracted and later I did a total hysterectomy and she is perfectly well to-day. I have four other patients in whom I have done the same thing. The process of constriction due to the cautery, the scar tissue contracting and inhibiting the growth of the cancer cells render it possible often times at a later time to take out the uterus and make a clean operation with the chance of recovery.

DR. HENRY O. MARCY, Boston: I have one criticism to make of Dr. Boldt's instrument; it does not give the hand room. Many years ago I found in curetting that in leaving a piece of cotton about the area and applying the thermocautery, steam was generated in a considerable degree and from that day on my colleagues and I have used a considerable amount of wet cotton packed above and below and we find that the steam thus generated penetrates the connective tissue deeper than the cautery itself and yet does not destroy the vitality of the structure. I believe that we can do a great deal in the palliative treatment of cancer.

DR. JOHN A. MCGLINN, Philadelphia: I think the first part of Dr. Boldt's paper in reference to the necessity of early diagnosis is of special importance. If we fully realized just what this cancer problem means, probably we would be more alive to the necessity of waging an active campaign of education among the profession and laity for the early recognition of the disease. With our present knowledge our sole hope of combating the evil lies in its early recognition. That cancer is on the increase is beyond question. In the decade from 1890 to 1900 it showed, in the registration area, an increase of 12.1 per 100,000 population. Statistics show that it has increased in this area from 53 per 100,000 population in 1890 to 70.8 in 1906. Williams has shown that in England one woman out of eight past the age of 35 dies of cancer. In a recent paper I have shown that in the registration area one woman out of eleven at all ages dies of cancer and past the age of 35 one woman out of nine will die of the disease. The age of greatest frequency is between 50 and 54, when one man in fourteen and one woman in five die of cancer. In the registration area in 1906, had cancer been cured, there would have been a total saving of life of 373,574 years, or a total saving of earning capacity of $224,144,400, enough to endow for all time laboratories and clinics of research which would eventually solve this most important problem of public health. In many parts of Pennsylvania the cancer death rate now exceeds that of tuberculosis. I have shown that if the present increase of cancer death rate and decrease of tuberculosis be maintained the foul plague will displace the white plague as the great curse of mankind by the years 1931. Practically one-third of all deaths due to surgical conditions are caused by cancer. When we realize that the uterus is the site in 27.68 per cent. of all cases of cancer in women, as gynecologists, we know that there is a splendid field for our endeavors. If such measures as Dr. Carstens suggested were adopted much could be done to eradicate this evil. As teachers we should remember that the profession needs to be educated in the need of early diagnosis just as much as the public.

DR. I. S. STONE, Washington, D. C.: I am not going to discuss the question in its broadest sense. Twenty-five years ago Dr. Bryne taught us the application of the cautery in the treatment of cancer of the uterus and Dr. Van de Walker how to use the chlorid of zinc for the same disease, and I believe we have learned very little since that time. Dr. Smith, of the United States Fish Commission, has recently told me of something which may at some time in the near future be announced from one of the laboratories of the United States making a study of cancer. In a certain lake there have been observed innumerable fish with cancer of the thyroid gland. That at first thought seems a little thing, but there is an association of cause and effect right there which these men are undertaking to sift to the bottom by transplanting the disease into other fish. We have always had a hope that the proof would come of the parasitic nature of the disease. Of course, I know nothing about the project personally or experimentally, but I think that this little ray of hope is something which may give us encouragement and I want every one to believe that we will yet be able not only to teach concerning the danger of cancer, but that we shall eventually find a cure.

DR. HOWARD A. KELLY, Baltimore: There are only two or three ways by which we can get around this cancer problem. One is by discovering the cause, and I hope we shall learn something from the work mentioned by Dr. Stone. Another method is by more radical operation. I feel that we have gone to the limit there. Another method is to get at the disease in an early stage. We ought to bend all our efforts to attacking the subject on that side. I would suggest circularizing the public and that we should not be too afraid of talking about these things in the public press. We talk a good deal about tuberculosis. This is a little more recondite, but when we have an enemy to face we have to bring him out in the open. We are entirely too reticent about telling reporters what they want to know, and in this way disseminating the information which will guide the people. One more suggestion is that every woman who has borne a child should be examined at least once a year from her thirtieth to fiftieth year. If this were done we would find the cases which to-day are coming to us too late to be helped. I use curettage and cauterization in these cases, but have a little different method from the one in general use. Dr. Spencer Brown, of Montclair, N. J., told me of the method of surrounding the parts with asbestos. When you get deep into the disease, instead of continually

burning the area, use the asbestos around one of the electrodes; do not touch the disease, but hold the cautery while it cooks the tissues. Hold it at one place for three, four or five minutes, and then move it to another point. You will find this a very satisfactory and effective way of using the cautery.

DR. JOHN OSBORN POLAK, Brooklyn: In cases which seem beyond the reach of radical surgical procedure, the disease may sometimes be completely extirpated by the cautery. By the use of Byrne's divulsing tenaculum the uterus may be drawn into a large, yet short, Ferguson speculum, and the entire body of the uterus burned out with the cautery, leaving only the peritoneal shell. I know several women who are living from six to ten years after this treatment, who were beyond the reach of radical operation at the time they presented themselves. To make this procedure successful, sufficient time must be taken carefully to char every surface, and to permit the slow radiation of heat. Great credit should be given to the memory of Dr. Byrne for all he did for cancer, and those of us who have lived within the radius of his work can testify to the high character of it.

DR. EMIL NOVAK, Baltimore: The question of educating the public in the crusade against cancer is one of the greatest importance. I think that in the life-history of cancer we can recognize several stages: (1) From the beginning of the cancer until the woman first observes symptoms; (2) from this period until she brings her symptoms to the attention of the physician; (3) the period between the time she calls the attention of the general practitioner to her symptoms to the time they are brought to the attention of the gynecologist; (4) from the latter period until the operation is performed. These stages are all of variable length, as we all know. Very few men will hold that the surgeon himself is often culpable in delaying operation on cancer. I think that all of us realize that the general practitioner is frequently to be blamed for tardiness in bringing the cancer patient to operation, and that the patient herself is even more frequently to be blamed for allowing her symptoms to go on until she is in a hopeless condition. The only aspect of this general problem on which I wish to speak is the rôle played by the ignorance of the patient and the point already made by Dr. Carstens and Dr. Kelly on the value of circularizing the public. I have had some little experience in trying to educate the public along medical lines, not only concerning cancer, but on general hygiene. In Maryland, we have an almost perfect system of public instruction in medical matters, carried on by means of public lectures, along the same lines followed out at the Harvard Medical School, also by a system of minor lectures to organizations of various kinds, and finally, in a rather novel way—by means of the newspapers. The two largest newspapers in the state have joined hands with us, and we issue a weekly "health bulletin" in which topics of interest to the public are discussed by authorities on these subjects. The articles are not signed, but are simply labeled as being issued under the auspices of the state medical organization. Week by week both newspapers publish identically the same articles, and they have done a great deal of good. Among other things, we have discussed cancer, and although we realize that the newspapers offer the best medium for reaching the public, we have also come to realize that we cannot do as much with the newspapers against cancer of the uterus as against other diseases. Newspapers which do not hesitate to publish advertisements of "female regulators," etc., assume a very bizarre modesty in discussing such subjects as cancer of the uterus in their reading matter. I think Dr. Kelly is right in saying that from the standpoint of cancer of the uterus we must for the present rely mostly on pamphlets. In this way we will educate the public and the public will educate the newspapers. We want to create first of all a good healthful public sentiment. People die of cancer because they do not realize the significance of the early symptoms. Ignorance is the fundamental obstacle in attacking the question of cancer, and we must save the people, not from their own folly, but from their own ignorance.

DR. H. G. WETHERILL, Denver: I want to call the attention of the Section to a little device which is very useful for other purposes and which Dr. Kelly's suggestion leads me to think might be applied to this particular use. The instrument is what is known as a "blender" in a pyrography outfit; a platinum point, such as is used in making burnt-wood pictures, having an opening in the end. A stream of hot air passes through the hole in the point and without touching the surface with the point the tissues may be cooked or cauterized to any desired degree. I see no reason why it should not work within the speculum as Dr. Kelly has suggested. We now know that primarily cancer is a local disease and that the successful treatment of cancer hinges on its early diagnosis. When we devise some means by which an early diagnosis may be made, then the results of the treatment of cancer may be improved. In the discussion on another paper the statement was made that there was no relation between fibroid tumors and carcinoma. We often find an association of fibroid tumors and carcinoma, but rarely find a true carcinoma originating in a uterine fibroid, and one sometimes sees uterine carcinoma which has not invaded an existing fibroid growth, but has skirted or circumscribed it. In some instances, however, fibroid tumors may cause carcinoma of the opposite wall of the uterus from pressure and irritation. We have that phase of fibroid tumors to think of in the consideration of this question.

DR. H. J. BOLDT, New York: The point has been this: All the talking that we do without some action is not going to be of benefit. I wish a committee might be appointed from this Section to formulate a set of resolutions in regard to the education of women concerning cancer. We will then get some results in the matter of early diagnosis. In the application of the galvanocautery a portable battery will not give a continuous heat sufficiently long, but if we have the direct or the alternating current, there is absolutely no trouble in getting enough heat. The prevention of burns has interested me very much. I have tried the different devices and find them all useless compared with the cooling speculum which I have shown. We may use any degree of heat and as long as desired without burning the vulva, or any part of the vagina on which we do not want the action of the heat. I have cauterized a large number of patients; furthermore, there is plenty of room to work through the speculum. The best form of treatment at the present time is enucleation with a sharp spoon, provided the disease has not advanced too far. Leopold has done considerable experimental work on animals, rats and mice; similar experimentation as is done in Buffalo. The important point is the early diagnosis. I hope some one will make a motion to the effect that the chairman appoint a committee from this Section to present resolutions to the main body, who shall communicate such resolutions to the public at large. The fact should be emphasized that cancer is not limited to any particular time of life. Women should be instructed to apply to their physicians at once on the first manifestation of any abnormal pelvic symptoms. Then if the physician does not feel himself competent, or if there is any question as to the diagnosis, he should endeavor to have some one help him in the case.

DR. W. B. CHASE, Brooklyn: I am entirely in accord with the sentiments expressed by Dr. Boldt and the others regarding prevention. Dr. Polak was mistaken in the fact that reference was not made to Dr. Byrne's thermocautery methods of treating cancer of the cervix. I believe that the pain of cauterization is far greater than the majority of physicians believe it to be. In fact, as I know, the pain is so great that it is very serious; whereas, the after influence of thermocautery is practically painless. If the cutaneous surfaces are not burnt the subsequent pain is practically *nil*. I congratulate the Section that evidences of cure of certain cases of carcinomatous disease of the uterus, even when the treatment is undertaken as palliative, are coming to our notice. It certainly ought to be encouraging to every one of us not to forsake a case simply because we believe it to be hopeless. We have struck the keynote of the whole situation when we ask that knowledge regarding early successful treatment be disseminated, not only among the profession, but among the laity, the sooner will the mortality diminish. While we are doing all we can to disseminate information, it behooves us as physicians and surgeons that we do not forget suffering womanhood, and that we continue as best we may to meet the indications for relief of these sufferers.

THE ANALGETIC EFFECT OF LOCAL APPLICATIONS OF SOLUTIONS OF MAGNESIUM SULPHATE AND OTHER SALTS

PRELIMINARY NOTE *

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In certain cases of cutaneous inflammation, arthritis, etc., in which I was led to make observations on the effects of external applications of magnesium sulphate, certain deep-seated pains independent of the particular affection of which a patient complained, apparently disappeared in sequence—I do not say in consequence, but in sequence—of the application. In order to test whether or not this was a psychic phenomenon, other applications were made—simple saline solution, distilled water, magnesium chlorid, sodium sulphate, etc.; and, while any moist dressing in these particular cases (I am not referring now to cases in general) seemed to diminish the pain somewhat, none of them had the same decided effect as the magnesium sulphate. The nearest in such power was sodium sulphate.

As to classes of cases: One was an aneurism. A man suffering from thoracic aneurism with projection of the chest wall had some slight cutaneous irritation over the mass—I have forgotten its cause. Application of magnesium sulphate solution was made. The relief to his deep pain was so great that he asked to have the dressing repeated after the irritation had subsided. This apparently was a psychic reaction; yet when the application was changed to sodium chlorid solution without the man's knowledge it failed to produce the same effect. But magnesium citrate likewise failed. The effect was not lasting and the application had to be repeated from time to time, and finally in this particular instance of aneurism it failed to have any further effect. Other cases in which this apparently reflex analgesia was observed were cases of gastric ulcer, gastric carcinoma, lymphatic leukemia, acute pericarditis, sciatica, headache of unknown origin, chronic pleurisy. In many instances it failed completely. To determine whether in any case there was any local anesthesia produced, tactile sense, pain sense, thermal sense, etc., were tested in normal persons, in the patients relieved by magnesium sulphate, and in the patients not relieved by it. In no instance was any effect of any kind on the cutaneous sensation detected, whether the examinations were made within ten minutes or after thirty minutes to an hour. I present this merely as a curiosity of observation. The measure may be useful at times when one does not care to give morphin in cases of deep-seated pains, acute or chronic.

The problem is complicated and the method of observation is inexact, so that I am not now prepared to say that there was a definite chemical or pharmacologic action of the magnesium sulphate in these cases. The matter seems, however, to be worth proving further.

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ABSTRACT OF DISCUSSION

DR. REID HUNT, Washington, D. C.: Dr. S. J. Meltzer, New York, did some experiments on animals in such a way that the psychic element could be completely eliminated. The remarkable results shown seem to be good reasons for believing that magnesium sulphate will relieve pain materially. Dr. Meltzer anesthetized a rabbit and while the animal was deeply anesthetized placed both ears in hot water for a very short time and then the right ear was treated with a strong solution of magnesium sulphate and the left ear with an isotonic solution of some other salt. Some little time afterward, the ear treated with magnesium sulphate was upright and seemed normal, the ear treated with salts of the same concentration was drooping and evidently not on the road to recovery. Later, the ear treated with magnesium sulphate was practically normal, only a few small ulcers being present; the other ear, treated with other salts had largely sloughed away. Dr. Meltzer suggested treating burns with magnesium sulphate. It has been used to some extent for burns of the first and second degree and has given much relief and evidently aided greatly in healing.

DR. THEODORE POTTER, Indianapolis: Do the members of this Section use the solution of magnesium sulphate in erysipelas? It is coming to be talked about recently and in some localities is rapidly supplanting the application of various other medicaments like ichthyol. We run from one thing to another and at present we run toward sulphate of magnesium. I have used it in a few cases of erysipelas, perhaps it has done as much good as cold water, which thus far seems to do as much good as anything. It appears that this drug will supplant other things rapidly, such as ichthyol, once widely used, and in which the profession has largely lost confidence.

DR. SOLOMON SOLIS COHEN, Philadelphia: I am, fortunately, or unfortunately, of that mental temperament which cannot always make an unqualified statement. I remember very well that my honored teacher of therapeutics used to be very positive concerning each particular drug that he was lecturing about, that it would "cure" many and various affections. All I am able to say of this or any drug is that it is useful under certain limitations. Magnesium sulphate, applied locally, in certain cases of erysipelas, is useful. But there are cases of intense, rapidly spreading and erysipelatous inflammation, with toxic systemic symptoms, in which I should be very reluctant to depend on the external application of Epsom salt as being all that medical science could do for the relief of the patient. In mild cases of strictly localized erysipelas, without much toxemia, a dressing of cold, saturated magnesium-sulphate solution, properly applied, seems to be about as useful as, and perhaps a little more useful than, anything else that I have used. It is not so dirty as ichthyol and seems to afford the patient a great deal of comfort. It relieves the burning especially. I don't know that it checks the spread of the local infection, but it does relieve, to a marked degree, the local distress. It may confidently be used for such purposes, but it should not be used for the things that it will not do. I may add that I sometimes say to my students, and I think it may be said to physicians, while an elephant cannot climb a tree, yet an elephant is a very useful animal for heavy draught purposes. So with our drugs. Magnesium sulphate in the case of erysipelas may climb a tree; but it is not to be depended on for heavy draught.

* Read in the Section on Pharmacology and Therapeutics of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

Physical Strain on Soldiers.—The British Army Annual for 1909 asserts that smartness of drill often causes unnecessary heart strain. "The position of attention is most injurious to the health of the soldier, and far too much of his time is passed in that attitude. The movements of respiration are seriously checked in the effort to keep the chest expanded. After a time the chest walls become more or less fixed in a position of expansion, and the range of expansion is permanently diminished. This condition greatly reduces the efficiency of the lungs, and thereby of the aeration of the blood, and is therefore a cause of disease and a lessened resistance to disease. A factor in causing heart strain in soldiers is excessive 'smartness' of the drill in certain regiments. Men are taught to move so promptly at the word of command that they anticipate orders with strained attention. This is harmful, and probably quite unnecessary." The annual urges that training should commence gradually and should never take place before breakfast or for too long a time. It is argued that it is not an advantage to train soldiers to be good acrobats or heavy weight lifters, and that training should be carried on with a constant view to avoid strain on the heart.

THE CORRECTION OF DEPRESSED AND IRREGULAR DEFORMITIES OF THE NOSE BY MECHANICAL REPLACEMENT

WITH REPORT OF CASES TREATED BY THE AUTHOR'S COMBINED BRIDGE AND INTRANASAL SPLINT *

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A year ago I called attention to an apparatus designed for the purpose of bringing into proper position the several parts of a depressed nasal arch and holding them until union had occurred. Some months after my first presentation of this subject I learned of an apparatus used several years ago for the support of a depressed fracture of the nose by Dr. O. B. Douglas. Dr. Douglas' device consisted of a mask fitted over the nose and fastened around the head by a band; to this was attached a bar extending above the nose. Holes were bored in the nasal bones, and through these sutures were passed which were tied to this bar. This appliance differed from mine as much in its mechanics as it did in its technic of application, for it did not give the proper support to the base of the nasal triangle, an important feature of my instrument.

The chief object of this paper is to report the work done and the results obtained, and to suggest the further application of the apparatus to deformities other than those of depression.

My apology for using some illustrations that have appeared before is that they represent the fundamental principles on which the action of the instrument rests, and are necessary to make the text clear.

The bridge of the nose is a bony arch formed by the nasal bones and the nasal processes of the superior maxillæ. The extent to which the latter enter into its formation varies greatly in the skulls of different races and in those of the same race. In examining a large number of Caucasian skulls, I was much surprised to find that from one-half to three-fourths of the nasal elevation was due to the nasal processes of the superior maxillæ, and in some skulls the nasal bones formed only the crown of the arch. The extent to which these processes enter into the formation of the arch is a matter of considerable importance, as will be seen when we come to consider the restoration of a depressed bridge.

The nasal bones articulate with each other, the frontal bone, the superior maxillæ and the vertical plate of the ethmoid, while to the lower edges are attached the lateral cartilages. Traumatic deformities of the nose are due to dislocations at these connections and to fracture of the bones.

Any method of treatment for depressed deformity of the nasal bridge that ignores the mechanical principles of the arch does not rest on a scientific basis, and, therefore, can not produce uniform or satisfactory results. Each word in the definition of the arch carries with it practical significance to the surgeon. An arch is a structure built in a curved line in such a manner that it will retain its position when the structure is supported only at its two extremities. In making a practical application of this principle, we must assume that the arch is made up of an indefinite number of segments, on the proper position and mutual pressure of each one of which depends the integrity of the entire structure. If any of these elementary segments are destroyed or displaced, the segments next in line fall together and the arch is established on a new and lower level, or, if the injury has been very extensive, it may be destroyed altogether. Now, if the segments of bone forming the nasal arch are only displaced by the injury, it is possible that, after the thorough mobilization of the bony structures, the original nasal arch may be restored by applying an apparatus that will exert force along lines that would tend to construct a normal arch; the displaced segments are then drawn back into proper position. If there has been destruction of any of the bony segments, either from extensive injury or, as more frequently happens, from disease, we have a different proposition before us; in this case the piers of the arch (the nasal processes of the superior maxillæ) must be brought closer together narrowing the span of the arch and raising its crown; if this can not be done to the normal extent, our only recourse is the injection of paraffin to fill out the deficiency.

In enunciating the basic principles on which this method of treatment rests, no reference has been made to the septum. It is my belief, founded on an experience in over 300 submucous resections of the septum, that in the adult the septum, as a vertical support, takes no part in the preservation of the nasal arch. It must not be forgotten, however, that the upper edge of the septum, wedged in between the lateral cartilages, is one of the segments of the arch and performs the important function of the keystone, and its displacement means the destruction of the arch.

Many of the methods in vogue for the treatment of fractures of the nose and for the correction of depressed deformities have not been based on proper mechanical principles; in fact, the laws of mechanics have been altogether disregarded. It is unnecessary to refer to the various means that have been proposed for meeting the conditions; suffice it to say that nearly all exert pressure in one direction only, and, if counterpressure has been applied at all, there has been no combined action between the two and the results have been neither uniform nor satisfactory either from a cosmetic or functional point of view.

The custom prevalent, especially among general surgeons, of placing straps of adhesive plaster across the nose and splints within the nasal cavities in cases of recent fractures, is to be condemned, for not only is the flattening increased by pressure of the straps, but the nasal chambers are broadened by the splints. Both influences tend to produce a flat nose.

It is mechanically impossible for any form of splint, packing, or intranasal appliance to raise or even to support a depressed bridge, for, according to measurements which I made on a large number of cadavers, the roof of the nose, if prolonged downward and forward, would meet the level of the floor at an angle of 70 degrees, while the vertical diameter of the nasal orifice is only three-eighths of the distance from the center of the nasal bone to the floor of the nose. It can be seen at once, therefore, that any intranasal appliance depending on the floor for support would immediately be propelled toward the choanæ by the inclination of the dorsal plain.

It is only by applying a combination of these two forces, one acting from within the nose at its apex and

* Read in the Section on Laryngology and Otology of the American Medical Association, Atlantic City, June, 1909. This article is here abbreviated by the omission of several pictures taken from casts of deformed noses. These pictures appear in the Transactions of the Section, and in the author's reprints.

the other from the outside at the base, that the former symmetry of a flattened nasal arch can be restored.

A careful study of the forces employed by Nature in the development of the flattened nose of the infant suggested the following apparatus, which is intended to duplicate these forces. The apparatus, shown in Figure 1, which has been made familiar to many rhinologists by a former presentation, consists of a fenestrated steel bridge, the wings of which are connected by a hinge, and the distance to which they can be separated is regulated by a thumb-screw. The edges of the wings are padded with rubber, and the small holes near the edges permit of gauze padding being stitched on. The second part of the instrument consists of two small hard-rubber splints perforated by four small holes.

Fig. 1.—Bridge and intranasal splint for correcting depressed deformities of the nose.

The application of the apparatus is as follows, assuming that there is a recent depressed fracture, or, in the case of an old deformity, that the tissues have been thoroughly mobilized by a previous operation to be described later: No. 14 iron-dyed silk is passed through one of the holes in the hard-rubber splint and knotted; the other end is threaded into a large curved needle; this is passed from within the nose through the cartilaginous dorsum just below its attachment to the nasal bones. This process is repeated on the opposite side. The bridge is then applied and the wings adjusted with the thumb-screw to give the proper support

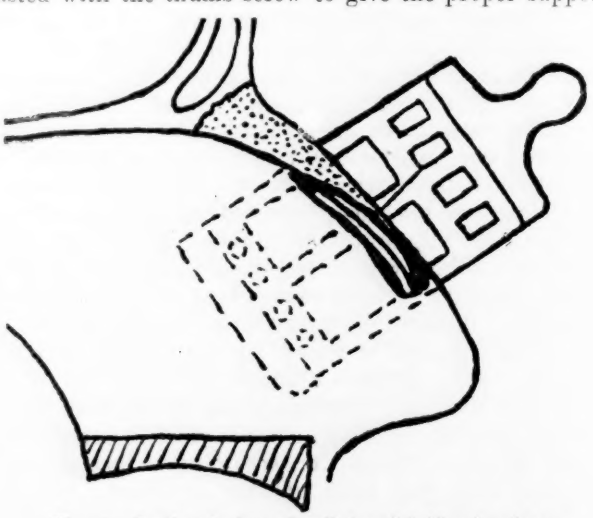

Fig. 2.—Sectional view of splint and bridge in place.

to the base of the nasal triangle. The sutures are then run through the fenestræ in the bridge, corresponding vertically to their exit from the nose and drawn tight enough to lift the dorsum into its proper position. The sutures are then tied together over the hinge. There should only be sufficient tension to support the bridge. The diagram (Fig. 2) shows the bridge and splint in position. The splint rests partly under the nasal bone and partly under the cartilaginous dorsum. The resultant of pressure and counter-pressure keeps the apparatus in position; it should be worn for ten days or two weeks.

On account of middle-ear complications in two cases, I have ceased using the spray and douche in the after-treatment as previously advised. I now clean out the nasal cavities each day with pledgets of cotton soaked in Dobell's solution and then introduce a small quantity of petrolatum. The wings of the bridge should be carefully padded and the skin where these rest should be bathed each day with alcohol and should be watched for evidences of too great pressure.

The respiratory function of the nose is not interfered with after the first two or three days, and the patients do not complain of great discomfort while wearing the apparatus. It is better for the patient to remain in bed during the treatment, but if the bridge is anchored to the forehead with adhesive plaster he may sit up.

According to Treves, in uncomplicated fractures of the nose, there is fixation in eight days and bony union in two weeks.

The mechanics of the apparatus is shown in the diagram (Fig. 3). A represents the downward pressure applied to the base of the nasal triangle and is produced by the tension of the sutures passing through the dorsum of the nose; B shows the horizontal pressure under

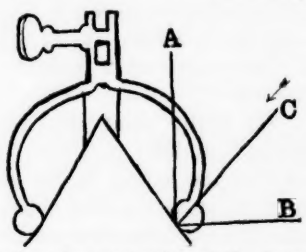

Fig. 3.—Illustrating the mechanics of the intranasal splint and bridge.

the control of the thumb-screw. The resultant force—that actually applied at the base—is represented by a line, C, bisecting the angle formed by A and B, and is the proper direction to support the base of the nasal triangle. A combination of this downward and inward pressure applied at the base and the balancing upward pull at the apex of the nasal triangle when applied to a nose in which the bony framework has been mobilized will tend to construct a normal symmetrical organ. This I have demonstrated on the cadaver as well as on the living subject.

External deformities of the nose to which this method of treatment may be considered applicable may be classified as (1) congenital, (2) deformity due to disease, (3) traumatic.

The extent to which those included in the first two subdivisions, that is the congenital cases and those in which deformity is due to disease, can be benefited by this method of treatment depends on the amount of healthy bony framework available for reconstructive purposes. This is always deficient; hence in these cases perfect results are not to be expected without the aid of paraffin.

Traumatic deformities may be divided into (1) recent fractures, (2) deformities resulting from old fractures, (3) habit deformities. The latter consist in deflection of the entire nose to one side, caused by the long-continued effort of the patient to relieve an obstructed nostril by pressing the nose to one side.

In simple recent fractures in which one or possibly both nasal bones are broken and slightly displaced, the

fracture can frequently be set by manipulation and a good result obtained without the use of any apparatus. But when the nasal bones tend to separate and in severe cases in which the nasal bones, the nasal processes of the superior maxillæ and the cartilaginous and bony septum are fractured and perhaps comminuted, the basic supports of the nasal arch have been destroyed and an apparatus is needed to hold the parts in proper position during the process of repair. Such cases present ideal conditions for the use of the combined bridge and splints. As soon as the swelling subsides after the injury, the broken parts should be carefully placed in position. The Adams forceps, the handle of a knife, a periosteum elevator may all be found useful in accomplishing this. Particular attention should be paid to the septum, for this is practically always fractured, and the disagreeable features arising from its permanent displacement are familiar to all.

Fig. 4.—Carter's chisel for the nasal processes of the superior maxillæ.

After the apparatus has been applied, the nose should appear normal in shape and it should be retained so until union has occurred.

In old traumatic deformities it is necessary to mobilize thoroughly all the tissues, and, in addition, if the nose is very flat, and there has been loss of tissue, it is frequently necessary to utilize a portion of the nasal processes of the superior maxillæ. A narrow chisel of special design (Fig. 4) is placed against the anterior edge of the nasal process of the superior maxilla and driven upward; the progress of the chisel can be watched by placing the finger on the side of the nose—care should be taken not to go through the skin. When the chisel has been fairly engaged, the strip of bone can be broken off by turning the chisel from side to side. There is little or no danger of splitting the bone into the lachrymal canal, for, as shown by Berens, the grain of

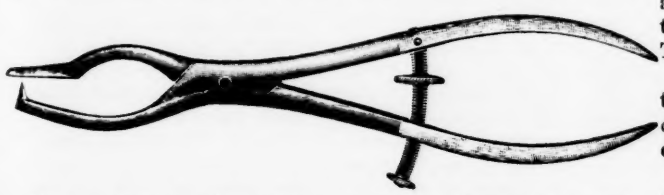

Fig. 5.—Carter's chisel-forceps for cutting through the nasal bones.

the bone runs away from the canal. I found by measurements made on a large number of skulls that the lachrymal canal is about five-eighths of an inch behind the anterior border of the nasal process of the superior maxilla; this places it beyond the danger zone in the normal skull.

Further mobilization of the tissues is accomplished with the Adams forceps (Fig. 6) by placing one blade inside the nose and the other covered with rubber tubing on the outside. The septum is then grasped between the blades and mobilized. A specially devised chisel forceps (Fig. 5) I have found very useful in cutting through the nasal bones near their articulation with the frontal bone. The chisel blade is introduced into the nose up to the desired point, the outside flat blade being covered with rubber tubing and the set-screw carefully regulated so that the chisel will not cut through the skin. In cases in which the septum is badly deformed, a submucous operation should be done a day or two before the bridge splint procedure. When the nose is very flat and the shortened septum is holding down the dorsum, I make an oblique incision through the septum, beginning at a lower level and emerging in the opposite nasal chamber near its roof. This permits the upper segment to be raised without leaving a perforation and is a substitute for the sliding flap operation I suggested last year.

Where there is a step-like deformity caused by luxation of the lateral cartilages at the point of attachment to the ends of the nasal bones, before applying the bridge, I make an incision from within through both lateral cartilages and the septal cartilage along the line of depression with a Myles rectangular septal knife. This enables me to lift the cartilaginous portion of the dorsum into line with the bony portion of the bridge.

The following cases which demonstrate the various circumstances under which the appliance may be found useful are from private practice and from Dr. Harmon Smith's clinic at the Manhattan Eye, Ear and Throat Hospital:

CASE 1.—This is reported for the second time to show present condition.

Patient.—An amateur athlete fell from a horse three years ago, striking on his nose. Following the injury the nose was flat and he was unable to breathe through it. The septum was thick, irregular and obstructing. The nasal bones over-rode the

Fig. 6.—Adams' forceps.

nasal processes of the superior maxillæ; the lateral cartilages were displaced backward at the junction with the lower edges of the nasal bones.

Operation.—On Jan. 23, 1908, a submucous resection of the septum was done; two days later the tissues were mobilized and the bridge splint applied. In this case the cartilages of the dorsum had to be lifted in the manner previously indicated. The immediate result was very good.

Present Condition.—There is a slight step-like depression at the juncture of the nasal bones with the lateral cartilages. The contour of the nose is fairly good; the intranasal condition is excellent. Time since operation, 14 months.

CASE 2.—This also is reported for the second time to show present condition.

Patient.—Man, aged 24, no venereal history; he has had atrophic rhinitis since early childhood. The nose is broad and flat, almost on a level with the cheeks. Nasal chambers are roomy and covered with crusts. He was treated with daily irrigation of saline solution and massage with 25 per cent. argyrol solution three times a week for six months.

Operation.—In March, 1908, I lengthened the septum by a sliding flap operation and raised the tip and modified the size and shape of the nostrils by an inverted Y-shaped incision (both procedures have been previously described). Before applying the bridge, pieces were chipped from the superior maxillæ to be used in building up the arch.

Present Condition.—Eight months after the operation, elevation of the bridge was only fair; the tip raised and the nostrils were of much better shape. The septum was perforated, the nasal chambers were much smaller and the atrophic rhinitis was greatly improved. Thirteen months after the operation the external appearance of the nose was the same; the atrophic rhinitis was almost gone. The health of the patient was greatly improved.

Remarks.—The bridge in this case is still depressed, but is higher than it was before the operation. This operation was

not altogether a success, due to deficiency of tissue with which to build up the arch.

CASE 3.—A boy fell on his nose, fracturing it on Sept. 5, 1908.

Examination.—Two days after the injury, the nose was swollen and discolored; a ragged cut extended across the bridge through which the nasal bones could be felt with a probe. The nasal chambers were completely obstructed.

Operation.—Under ether, the fractured nasal bones were found protruding into the nasal chambers. The septum and left nasal process of the superior maxilla were also fractured. The parts were simply adjusted and the bridge splint applied.

Result.—The result in this case was excellent, both as to function and cosmetic effect. The boy tells me that he can breathe through his nose better than before the injury. These good results have continued up to the present time, five months after the operation.

CASE 4.—A boy, aged 14, had his nose broken in May, 1908.

Examination.—There was a step-like depression at the point of junction of the nasal bones with the lateral cartilages and considerable over-riding of the nasal bones over the nasal processes of the superior maxillæ, especially on the left side, where there was a large bony protuberance. The nasal chambers were almost obstructed by a thick, irregular septum.

Operation and Result.—In July, I did a submucous resection of the septum, and in October the bridge splint was applied. In this case the septum had to be lengthened. The result was excellent and has remained so up to the present time. The nasal stenosis is completely relieved.

CASE 5.—A young man, aged 25, was thrown from his horse on Nov. 28, 1908. He fell on his nose, sustaining the following injuries, case seen four days after the accident: The nasal bones were fractured and separated and over-riding the nasal processes of the superior maxillæ; the septum was fractured. Operation was done Dec. 3, 1908. The result both from a cosmetic and functional point of view was excellent.

CASE 6.—A boy, aged 14, was kicked in the nose by a horse on Sept. 16, 1908. He was treated by a local surgeon, who put splints in the nose and fastened strips of adhesive plaster across the bridge.

Examination.—I saw him for the first time four months after the injury. There was a complete saddle-back deformity. On the nasal bridge was a large scar, and a cicatricial band connected the right ala with the cheek. Both nasal cavities were obstructed by an irregular, thick septum.

Operation.—A submucous operation was done and four days later the bridge splint was applied. There was very little bony tissue left to build upon, as the injury was a severe one and some bone had sloughed out. The cicatrix was removed and the bare surface was skin-grafted.

Result.—The result a month after the operation was very imperfect from a cosmetic point of view, though the nasal cavities were perfectly clear and open. I then made a small incision through the original scar, dissected up the scar tissue and skin and injected about thirty drops of paraffin. The present appearance of the patient is greatly improved (due chiefly to the paraffin injected), and he has a good breathing space.

CASE 7.—This was a traumatic deformity of ten years standing in a man of 22. There was no depression, but the entire nose was displaced to the left and the right nostril was obstructed.

Operation and Result.—On January 12, a submucous resection of the septum was done and four days later the nasal tissues were mobilized and the bridge splint applied. The result is perfectly satisfactory, the nose is straight and the nasal passages are unobstructed.

CASE 8.—A Jewess, aged 18, fell on her nose eleven years ago, fracturing it. She had a pronounced hump on the dorsum, and the entire nose was displaced to the right. The left nostril was obstructed by a deflected septum.

Operation and Result.—A submucous resection of the septum was done on November 20, and the bridge splint operation on November 28. The hump was subsequently removed through a small incision over the dorsum. The result is very satisfactory, the nose is symmetrical and the nasal obstruction is relieved.

CONCLUSIONS

My experience with this method of treatment for deformities of the nose leads to the following conclusions:

1. Cases in which there has been loss of the bony framework of the nose, either from disease or extensive traumatism, are not suitable for this operation.

2. In recent fractures and old traumatic deformities when the tissues have been properly mobilized, this method should yield good results.

3. After a lateral deformity or displacement of the entire nose has been reduced by operation the apparatus should be worn as a retaining splint. For the elasticity of the skin and soft parts tends to restore the former malposition of the organ if it is not so restrained.

4. The passage of sutures from within the nose through the dorsum does not complicate the case.

5. This method of treatment corrects the deformity by reversing the direction of the forces that produced it. It also relieves the intranasal deformity, which we know tends to increase with age and eventually becomes the predominant feature in the case.

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ABSTRACT OF DISCUSSION

DR. J. O. ROE, Rochester: In recent fractures, I consider Dr. Carter's plan excellent, but in cases of a distorted nose from an old fracture, where a definite amount of osseous tissue has been thrown out and where there is very much thickening of the parts, making the nose much more firm than it was before, the plan which I have adopted in these cases, it seems to me, gives better results than could be obtained by Dr. Carter's fracturing and suspension method. When there is a fracture of the nose, there is displacement of the nasal bones downward and outward, so that there is a flattening of the top of the nose, with a corresponding bulging at the sides. If the top of the nose is lifted according to Dr. Carter's plan, you must, in order to re-establish the normal outline, have as a result a much larger nose, for the reason that the base of the nose is very much wider than before the injury. Even by his plan of completely mobilizing or severing the bones with his chisel, it would be difficult to stretch them out or get them back to their normal position. Another drawback I should think he would encounter is the raising of the top of the nose from the septum, which has also been knocked down and the top line made much lower. It is true, as he has stated, that the arches of the nose form the main support and that the septum has little to do with holding up the bridge, but in liberating the nasal arch from the septum and raising it up and, of course, holding it there until ossification of these bones in their new position has taken place, the septum would stand up as a partition, unattached except at the bottom and ends. Several years ago I attempted to treat some of these cases in this manner by refracturing the bones, somewhat according to Dr. Carter's plan, and supporting them from the inside. One method that I adopted was to use a bridge, somewhat similar to Dr. Carter's and inserting one of the arms of a U-shaped piece of steel and pulling upward on the outer arm at the point opposite to which I wished the pressure on the inside of the nose and which portion I covered with rubber tubing. Another plan that I adopted was to introduce both arms of a jointed triangle into the nose and forcibly separate them by means of a screw, using the floor of the nose for the fulcrum, and having the upper arm bent in the required shape to give the necessary support at the spot desired. As neither of these plans gave satisfactory results, I, of course, never reported them. The plan that I then adopted and which has given me most excellent results is as follows: I make a subcutaneous resection of this displaced bony tissue and by raising the soft tissue from the top of the nose so as to make a place for this resected portion on the top of the bone, thus filling in the depressed portion. In other words, I take the tissue from the place where it is not wanted and place it in the depressed portion, where it is needed, thereby making a symmetrical nose.

The plan that Dr. Carter suggests for raising the tip of the nose, where the lateral cartilages are flattened and bulging

outward, by stitching them together so as to draw their bases in, can not fail to be of service in some cases. In the correction of nasal deformities, however, we meet with such an infinite variety of conditions that the plan which works well in one case will not do at all in another, even though the conditions may seem to be quite similar. Every method has its advantages in certain cases, but the conditions of the case must be studied with a view to ascertaining how and in what manner the deformity can be best corrected, rather than to consider the adoption of any one method for all cases. It is therefore only by varying the different methods to meet the requirements of different cases that we can hope for uniformly successful results.

DR. C. F. WELTY, San Francisco: I have operated on one patient in this way and am sorry to say my results were not perfect, although the man was very much improved. He had a very severe extensive traumatic injury, having been thrown against a street car. I have not tried Dr. Roe's plan, but apparently that would work also. Two or three years ago, I transplanted a piece of bone for saddle nose and had better results with that than I did with this apparatus and three years after that transplantation the patient's nose was in perfect condition. I believe, however, that the Carter splint is a splendid method.

DR. R. H. GOOD, Chicago: I have used Dr. Carter's splint with excellent results in a case of marked deformity in which the nose was pushed to one side. I have the pictures both before and after operation. There were several complications which perhaps might have been prevented. For instance, there was sloughing of the cheeks from pressure, which I think could be avoided by having the parts which rest on the superior maxilla flat. Another complication was stitch infection. I used silkworm gut; perhaps if I had used silver it would have been better. I found that the intranasal splint was a little too large for my case, the patient being only 15 years old. The result, however, was very good.

DR. W. W. CARTER, New York: Dr. Roe states that when the bridge of the broad, flat nose is raised the nose will be too large. Now if this were the case I would have to make tissue; for it requires more tissue to elevate a nose and at the same time retain its original breadth, but it does not require more tissue to elevate a nose if we make its base narrower. This is what is accomplished by this method: the excess in breadth of the nose is added to its height by narrowing the base of the nasal triangle by means of the adjustable wings of the bridge. While I do not claim to have obtained perfect results, still I hope that I have succeeded in impressing you favorably with what can be done for a class of patients for which so little has been accomplished in the past. I believe that the instrument is constructed on proper mechanical lines and that by means of it force can be so applied as to construct a normal nose, provided that there is enough bony framework left with which to work.

The sloughing referred to by Dr. Good will not occur if a proper amount of gauze padding is used on the wings, and if the skin under these is bathed each day with alcohol. Then, too, in applying the instrument too much tension must not be employed. I find that silk is the best suture; it is more easily tied and untied, and by capillary attraction it sustains drainage to a great extent. I have had no trouble with stitch abscess. A certain amount of pus always forms around the stitch, but I keep it washed away with boric-acid solution.

No two noses that I have operated on yet have been of the same size or shape, so I seldom use the intranasal splint that comes with the bridge. I usually make them of guttapercha at the time of the operation and mould them to suit each case. Several men have asked me if there is not danger of injuring the turbinate bodies while we are chiseling off the nasal processes of the superior maxillæ: in reply I will say that we are working on a plane anterior to these bodies and do not come anywhere near them.

The Criminally Insane.—Dr. James J. Walsh, New York, favors perpetual confinement of the criminally insane. He holds it absurd that a man may have an attack of mental insaneness that will lead him to take human life, and then be expected to get over his mental condition so as not to be likely to do the same thing again.

VASECTOMY AS A MEANS OF PREVENTING PROCREATION IN DEFECTIVES *

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The general public is rapidly coming to realize that our public dependents are largely recruited from the defective classes, and that but comparatively few persons become a public charge as the result of disease or adversity.

Neurologists recognize a so-called predisposition to insanity, which in fact is an inherited defect, or perhaps, more correctly speaking, defects, as there are usually several defective conditions in the mental and nervous organization, and frequently very pronounced physical stigmata.

Sanger Brown says, in speaking of this predisposition, that the phenomena which this condition presents may be readily accounted for by assuming a defect or defects in the neurons (the cell units of which the nervous system is composed) of such a nature that stimuli from environment may not reach the neurons of the cortex, or, having done so, the impression made there may not be sufficiently deep and lasting, or, in other words, well elaborated. Keeping in mind this condition of neuronal defects, it is easy to understand how certain individuals fail to respond to educational influences, moral or intellectual, or both.

That Sanger Brown is correct there is no doubt; and it is equally true that the same condition accounts for the large majority of cases of inebriety, pauperism, crime and drug habit. While defectives fail to respond to moral or intellectual influences, there is another fact that figures very largely, especially in the criminal class. It is that the centers of self-restraint are most defective. These persons may have full knowledge of the nature of their offenses and may fully comprehend that these offenses are morally wrong; still they have not the will-power to resist the impulse to commit a wrongful act when the opportunity presents itself. It is possible that such an individual, who would commit a crime under certain conditions, would be the first to reach the mourners' bench at a Methodist revival. He is as a ship at sea without a rudder, wafted about and changing his course with each variation of wind, all being well if the sea is calm and the weather fair; but a disastrous shipwreck is imminent in the event of a storm.

It does not necessarily follow that a defective person is to become a public charge, for included within this class are to be found the most gifted as well as the most vicious, weakest, and ordinarily, the most unhappy of mankind. Chatterton, Goldsmith, Coleridge and Charles Lamb are but a few instances of the class of gifted defectives. Invention, music and art are sometimes of high order among these persons, but desultory, half-finished work is decidedly more common. Concentrated effort is often impossible to such persons. Executive or business faculty and judgment are seldom developed.

Persons of this character who appear on life's stage and play their part contribute much to the world's beauty and pleasure. They fill a place in history, though history often fails to mention the legacy they leave to succeeding generations in the way of defective children, which become a misery to themselves and a charge on society.

There is no disputing the fact that mental as well as physical defects are transmitted to the offspring. If a

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*Read in the Section on Preventive Medicine and Public Health of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909.

defective marries a normal person, frequently the departure from the normal is much less marked in the offspring than it was in the parent, while, on the other hand, if two defective persons marry their children inherit the stigmata of both mother and father, thus becoming a more defective type than either parent.

Naturally the tendency is for the abnormal to mate with their kind—to seeking their own level; then, too, one of this type seldom finds a normal person who would be attracted to him. This condition favors the rapid increase of the number of defectives as well as the accentuation of the type. This class of individuals is very prolific, from the fact that in the matter of sexuality, as in everything else, they know of no self-restraint. They indulge their selfish lust, ad libitum, with no thought whatsoever as to what the result may be; they absolutely refuse to take into consideration their own ability to take care of their offspring. They simply know that they want gratification, and gratification they are going to have.

This is the condition at the present time, and will continue to be so long as this class is permitted to remain fertile.

In addition to the foregoing causes for the rapid increase of defectives, we find that the ranks are being contributed to by persons suffering of some mental, nervous or physical disease or exhaustion, begetting children while suffering from one or more of the abovementioned conditions. Nature punishes those who violate her laws, and the punishment is visited unto the third and fourth generation. It is very possible that the children of physically exhausted or mentally disturbed parents will manifest a degree of defectiveness.

The children of syphilitics are almost sure to be defectives. Alcoholism, drug habits, immoral excesses are some of the common causes of mental and nervous exhaustion that render a person incapable of begetting normal children. Overwork and many physical maladies which produce in the sufferer a profound mental depression are frequently responsible for defective offspring. Thus it is that we frequently find that the children of ministers, lawyers, doctors and other professional and highly respected business men have pronouncedly disorganized minds, manifesting the same by immoral, criminal or insane acts.

Prenatal impression plays its part in the production of defectives.

Many of you know or have seen physical deformities as a result of profound mental impression during the period of gestation. As the mental faculties are much more highly organized, they are a great deal more susceptible to such impressions. Hence mental markings are more frequent than physical ones. It is very probable that a child of a woman under a mental strain during this period will show some evidence of nervous disorder early in life, and, if not carefully cared for during the critical periods of development, will be the subject of an outburst that will establish it as an abnormal being, beyond the peradventure of doubt.

Several years since a woman who was the mother of a boy at that time serving a sentence in a penal institution told me that during the time she was carrying the boy a man holding a mortgage on her property, taking advantage of her inability to settle the same at the time of maturity, forced a foreclosure, and it excited in her an intense hatred for this creditor. She could think of nothing save his physical repulsiveness and the unprincipled manner in which he had treated her. He was a homely man with very red hair, and she looked on him as a thief and a scoundrel, having robbed her of her equitable right. When this boy was born he had red hair, notwithstanding there was no such thing known in any of his ancestors, and he had always been apparently criminally inclined, although of a respectable lineage. This was undoubtedly the result of a prenatal impression.

The decidedly defective individual is very easily recognized, as the mental abnormality is usually accompanied with prominent physical defects, described by Lombroso, Wiesmann and others as morphologic stigmata. There are quite a number of these stigmata which indicate with considerable certainty the extent and nature of the mental defect. I shall not dwell on the various physical abnormalities that are found in the defective. I do wish, however, to call attention to the two that are found most frequently and the least dwelt on by writers on this subject, namely, imperfect refraction and color-blindness. It is very rare that we find a defective who does not have one or the other of the above-named conditions, though possibly to so slight a degree that the defect may be entirely overlooked. There are persons of this class in whom the only indications are temperamental, the most common being selfishness, ingratitude, inconstancy, egotism, inability to resist an impulse or a desire.

The disposition to permit all classes to procreate without restriction has brought about a condition shown by statistics, the study of which will prove very interesting.

Taking Indiana for the past eighteen years we find the following:

In 1890 the cost of maintaining the inmates in the state institutions, county poor asylum and orphans' homes was $1,201,461.24, while in the year of 1908 the cost was $2,443,140.55, or an increase of $1,241,679.31, which is considerably over 100 per cent. This is for maintenance alone, as none of the appropriations for the purchase of additional property, erecting new buildings or permanent improvements are included in this estimate. Nor is the cost of maintenance of county jails or workhouses included, as I was unable to procure accurate data for this period. But I did learn that in the year 1892 there were 600 jail inmates, as against 1,275 for the year of 1908.

In 1890 there were 8,670 inmates confined in state institutions and asylums for the poor; in 1908 there were 14,398, an increase of 5,728. This relates to such state institutions as those for the insane and feeble-minded, reformatory and penal institutions, poor asylums and Soldiers' and Sailors' Orphans' Home. It does not show the total increase, as the Soldiers' and Sailors' Orphans' Home, which is an institution that in no way should be considered as an institution for the care of defectives, shows a material falling off in its population, while the school for feeble-minded youths, whose entire population consists of the most pronounced defective class, shows an increase from 358 in 1890 to a population of 1,054 in 1908, an actual increase of 696, or over 172 per cent. in the course of eighteen years. The asylums for the poor do not show anything like such an increase. But these abodes, like the soldiers' and sailors' orphans' homes, hold many persons who are there as the result of adversity and not degeneracy.

Beginning with the Soldiers' and Sailors' Orphans' Home, whose population is made up almost entirely of normal persons and which shows a decrease in population, on up through the county poor asylums, county orphans' homes, prisons, insane hospitals, epileptic village, and institutions for the feeble-minded, each insti-

tution shows an increasing percentage in proportion to the extent that it depends on defectives for its population.

In view of the above-described conditions, it seems to me it is race degeneration and not race suicide that should fill us with apprehension. History teaches that the fall of powers and principalities in the past has been due to the weakness of the people and not to the scarcity in numbers. Shall we follow the example of past ages or shall we learn from them a lesson and profit thereby?

Herbert Spencer says that to be a good animal is the first requisite to success in life, and to be a nation of good animals is the first condition to national prosperity. We may become a nation of good animals if we direct the same intelligence to the breeding of human beings that we do to the improvement of the breed of our domestic animals.

Restricting propagation seems to be universally agreed on as necessary for the relief of the downward tendency. The difficulty lies in deciding on the proper method to bring about this restriction. Some have advocated the education of public opinion so that those who are from defective parentage shall, in the face of such public opinion, abstain from marriage. This seems to me even worse than absurd, for I believe that we shall never be able thus to prevent the sexual intercourse; while there might be fewer marriages there would be more bastards.

Restrictive legislation has been advocated and many states have passed restrictive marriage laws. Minnesota has a law providing that within the bounds of the state no marriage shall be permitted either party to which is epileptic, imbecile, feeble-minded or afflicted with insanity, unless the woman be over 45.

Michigan, Delaware, Connecticut, Indiana, New Jersey and North Dakota have also passed laws for the purpose of preventing marriage among defectives, but unfortunately matrimony is not necessary to propagation, and the tendency of these several laws is to restrict procreation only among the more moral and intelligent class, while the most undesirable class goes on reproducing its kind, the only difference being that illegitimacy is added to degeneracy, and thus the children enter on life's battle doubly handicapped.

Dr. R. W. Bruce Smith of Toronto asks:

> What avails the continuous increase of hospitals, asylums, and similar institutions if the number to occupy them grows faster than the accommodations? How can we possibly leave the world better for our work if we do not, at least, begin some action to stop this vicious stream at its fountain-head? . . . Those who have faithfully and patiently wrestled with this perplexing problem have concluded that the only course to be taken is to separate all true degenerates from society and keep them by themselves in carefully classified groups, under circumstances which will insure that they shall do as little harm to themselves and their fellows as possible, and that they shall not entail on the next generation the burden which the present one has borne.

This method of segregation would necessitate the expenditure of enormous sums of money to establish and maintain colonies or industrial refuges which, I believe, would be a disappointment in the end. The colonists would necessarily live under restraint and, unless guarded like actual prisoners, many would escape. In their effort to escape detection these unfortunates would naturally realize that they could not engage in legitimate trade, and therefore would resort to crime, becoming a further menace to society. This plan, moreover, means life imprisonment for a large army of men and women who should be given the opportunity to enjoy life and liberty.

Castration is another means that has been suggested for the purpose of preventing procreation in the unfit. A superintendent of a Kansas institution for the feeble-minded thus operated on forty-eight boys in that institution about the year 1898. He has since severed his connection with the institution and if there has been any further report of his work I know nothing of it. This operation is, as I have repeatedly stated, of too much gravity and causes entirely too much mental and nervous disturbance ever to become popular or justifiable as a medical measure; but I heartily endorse it as an additional punishment in certain offenses.

It can readily be seen that one subjected to castration would in all probability become very morose and downcast on account of the deformity alone. Besides, the testicle has a double function, that of providing an internal as well as an external secretion, and the organism cannot maintain a normal condition when robbed of this internal secretion. This is manifested by the perceptible change in the eunuch.

Since October, 1899, I have been performing an operation known as vasectomy, which consists of ligating and resecting a small portion of the vas deferens. This operation is very simple and easy to perform. I do it without administering an anesthetic either general or local. It requires about three minutes' time to perform the operation and the subject returns to his work immediately, suffering no inconvenience, and is in no way hampered in his pursuit of life, liberty and happiness, but is effectively sterilized. I have been doing this operation for over nine years. I have 456 cases that have afforded splendid opportunity for postoperative observation and I have never seen any unfavorable symptoms. There is no atrophy of the testicle, no cystic degeneration, no disturbed mental or nervous condition following, but, on the contrary, the patient becomes of a more sunny disposition, brighter of intellect, ceases excessive masturbation, and advises his fellows to submit to the operation for their own good. And this is the point in which this method of preventing procreation is so infinitely superior to all others proposed—that it is endorsed by the persons subjected to it. All the other methods proposed place restrictions and, therefore, punishment on the subject; this method absolutely does not. There is no expense to the state, no sorrow or shame to the friends of the individual, as there is bound to be in the carrying out of the segregation idea.

There is a law providing for the sterilization of defectives in effect in Indiana and it is being carried out at the Indiana reformatory. I regret very much that it is not being followed up in the other institutions of the state; but there is no doubt that it will come about in a very short time.

Brown-Séquard, one of the earliest observers of the effect of the secretions of the reproductive glands, said that an extract from the fresh testis, when injected under the skin or into the blood current, had a remarkable influence on the nervous system, mental and physical vigor; that the activity of the spinal centers were greatly improved, not only in cases of general prostration and neurasthenia, but also in the case of the aged. Brown-Séquard maintained that the general dynamogenic effect was due to some unknown substance formed in the testicle and subsequently passed into the blood. Although many of the more recent investigators as Poehl, Zath and others assert that it is found in the external secretion, my own observations lead me to indorse the opinion of the latter.

After observing nearly 500 males in whom I had severed the vas deferens I am prepared to state that there is not only a diminution of the muscular and nervous fatigue resulting from muscular exertion, but also a lessening of fatigue sensation and a decided increase of energy and well being. I have observed splendid results in cases of neurasthenia.

That severing the vas deferens or the oviduct does not arrest the sexual development has been proved by doing the operation on young animals before they reached the period of puberty. That there is no atrophy or cystic degeneration has been satisfactorily demonstrated by ten years' observation. It was on account of these facts that I suggested that the vas deferens in the male and the oviduct in the female be severed as a means of preventing procreation in defectives, as the operation has no deleterious effect on the subject, but the contrary. The operation in no way endangers life.

After cleansing the scrotum with soap and water I bathe the part in alcohol, then grasp the spermatic cord between the thumb and the index-finger of the left hand, detect the vas, hold it firmly and fix it with a pair of bullet forceps, then cut down on it, draw it through the scrotal wound by means of a Tenaculum hook, strip it of all membranes and the accompanying artery, ligate above and sever, cutting away any portion from the vas that may have been damaged in the manipulation. This is done in order that the end next to the testicle may not become closed. It is very important that it shall remain open, in order that the secretion of the testicle may be emptied around the vessels of the pampiniform plexus and there absorbed, for it is through this process that the economy receives the tonic effect of the secretion; also where the end closes there is likely to be cystic degeneration. The action of the muscle closes the skin wound and no stitch, collodion or adhesive plaster is needed. The patient returns to his work immediately and suffers but little inconvenience.

There is no diminution of the sexual power or pleasure. The discharge at orgasm is but slightly decreased.

The operation in the female is more difficult, but, if skilfully done, no more hazardous. The oviduct is reached through a median incision, the tube ligated near the uterus and severed beyond the ligature.

There are over 300 girls in the institution for the feeble-minded in Indiana who, if treated in this manner, would be able to leave the institution and be self-supporting, as the only reason for detention is for the purpose of segregation, as they have not the character to resist the importunities of unprincipled men when thrown on their own resources. The result is that when they are released from the institution they shortly return in a state of pregnancy, or marry some one unable and unfit to rear a family. In either event there is an addition to the dependent class. With the oviduct severed this danger is absolutely obviated. In case of the male the desire for the opposite sex is in no way diminished; his mind is strengthened and his nervous system benefited from the reabsorption of sperm. It has a decided effect on the centers of self-restraint, besides improving the physical condition, as the masturbator refrains from excessive indulgence in this practice. Almost wholly as the result of increased will-power, the rapist or criminal will be aided in resisting his pernicious impulses. Thus we have a means of preventing procreation in the unfit, at the same time improving the condition of the unfortunate individual.

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ABSTRACT OF DISCUSSION

DR. L. H. MONTGOMERY, Chicago: If the stigmata of a defective or degenerate are transmitted to the children in many instances, as I firmly believe, how are we going to be entirely satisfied, scientifically and otherwise, that tuberculosis is never transmitted to the offspring? We are all aware that syphilis, insanity, epilepsy and other neurotic conditions are handed down and—due to prenatal influences or otherwise—even alcoholism is inherited or transmitted sometimes. We all see instances of these influences transmitted to the offspring. How are we going to do away, entirely, with this question the author has just raised?

DR. F. C. VALENTINE, New York: Every specialist in genitourinary diseases must agree with the important physiologic and surgical points brought forth by Dr. Sharp. For emphasis it may be permitted to elaborate them by separate discussion. He says that vasectomy is easy to perform; to this one may add that it is the simplest operation in genitourinary surgery. It is well known that the health of the testicle is not impaired by severing its excretory duct, as the testicle does not suffer from occlusion of the duct, as occurs in epididymitis. Moreover, within the last few years many vasectomies have been performed, at White's suggestion, in the hope of thereby relieving prostatic hypertrophy; the testicle, so far as literature shows, was in no wise affected thereby. Two objections to the operation at once occur to the mind, namely: Most, if not all, those operated on were prisoners, therefore the power to procreate was taken from them under duress; it remains questionable that we have a legal right thus to deprive them. On the other hand, the public will soon learn that vasectomy does not influence the power to perform sexual intercourse, but does away with the risk of impregnation. This would lead many sexual profligates to importune physicians for this preventive operation, which involves practically no pain, and, if carefully done, is without danger. To say that no practitioners would be found thus to subvert the purpose of marriage, would be expressing a faith in the morality of the profession even greater than that which I possess. In mitigation thereof, it is but proper to admit that should the person operated on desire the restoration of his procreative function, the continuity of the severed vas and its patency can be restored by a second operation. The restoration of the vas is by far a more delicate and difficult operation; neverthless, when properly performed, it has proved successful. That vasectomy can impart stamina, moral strength, the ability to resist immoral impulses and temptation, as suggested by the author, is, I must confess, an entirely new idea. While no explanation presents itself for this peculiar psychologic victory, the author merits inexpressible credit for the results he has obtained. His essay will doubtless lead many other surgeons of reformatory and penal institutions to test the question. If the reduction of criminals results his name will go down in history as a notable pathfinder.

DR. W. FORREST DUTTON, Walker's Mills, Pa.: It is not clear to me what is meant by the defective classes and their limitation. We know that with the increase of population the defectives are bound to increase. We cannot yet deny the part played by hereditary influence. I think we have discovered the efficacy of educational factors in many cases, and that instruction should bear a great deal on these things. If we get at the root of all this evil, we will have no trouble at all in preventing the defective classes. In the adoption of so many radical remedies for wrong conditions in the past, I think the educational feature is the factor that should be paramount in dealing with defective classes, whatever they may be.

DR. WOODS HUTCHINSON, New York: Crime is a medical problem in at least half of its extent; and I look forward to the day when the physician will be looked on as the criminologist of the country, and when our police courts and our police administration will be put largely under medical control; and when that time comes we shall save half of the cost of our courts, our prisons, and our poorhouses. We have the humiliating spectacle of the defective criminal insane of the community, 2 per cent., putting to enormous expense and holding in terror

the other 98 per cent. of the community, because we have never taken any steps to stop this at its fountain head by preventing this reproduction of defectives. Those questions of the increase of crime are very difficult of settlement; because, in the first place, we are enlarging our definition of crime constantly, making many offenses which were not considered offenses before; as, for instance, in the prohibition communities it is a crime to buy a drink, and in our new tuberculosis campaign we have taken away our former right to spit. Therefore, it is not safe to judge by the apparent increase in the number of convictions. On the other hand, it seems almost certain that these people are at least holding their own with the rest of the community. They have an enormous fecundity. I had the opportunity, recently, of seeing the family records of defective children who had been committed to the New Jersey home at Vineland. Over three hundred records had been taken for the purposes of correctional care. Most individuals had from one to three, and in some cases six or seven, defective relatives; and the families were large, running anywhere from six to twelve and fourteen. The birth-rate is high among such people; on the other hand, they have a very high death-rate, so that helps to keep matters level. About one-third of all our criminals are born of criminal ancestors, and that reproduction might have been prevented if we had taken the matter in hand. Dr. Sharp has made a valuable practical contribution to this question, particularly the fact that it is an operation which is so painless and produces so few undesirable results that defectives are willing to submit to it of their own accord. That, I think, at first appears almost too good to be true; yet those people are not at all desirous of having children; it is not only the feeble-minded who would be glad to be relieved of that responsibility. One of the objections made to this operation is that it might become popular in other classes of the community. By putting these people in this condition we can allow them to return to outdoor life and to a self-supporting existence. Physicians having anything to do with defectives are aware that the most serious practical problem in the care of the female defective is this question of preventing reproduction. These women have to be kept under custodial care during child-bearing life. A feeble-minded man has to find a feeble-minded woman before he can procreate; a feeble-minded woman has no such limitation. A movement of this sort would immensely increase the production of defectives in the community. Whether it is going to be productive of all the moral and hygienic benefits to the defectives themselves that Dr. Sharp claims for it I do not know. It is only fair that the male gland should be subject to the same assaults as the female gland has for twenty years past, and see what the results are. I can easily believe that the criminal and the defective would be rendered more amenable to discipline by this operation, inasmuch as it has been habitually practiced on horses and other animals for the purpose of making them more amenable to control.

DR. CHARLES A. ROSENWASSER, Newark, N. J.: As vice-president of the Dependency and Crime Commission of New Jersey, I took part in an investigation as to the causes of dependency and criminality, and had occasion to note the important part played by heredity in the development of the defective and delinquent. That there is urgent need of doing something practical and effective to lessen the propagation of the unfit, has been strikingly shown by the investigation conducted some years ago in Illinois, as a result of which it was learned that all the defectives and delinquents in the state at that time, could be traced to one hundred and fifty families. I intend to have introduced into the legislature of New Jersey, this winter, a bill similar to the one introduced in Illinois this year, making the sterilization of habitual criminals compulsory. And, at some later time will take up the defective class. As my work lies largely with inebriates, a class of patients with weakened will power, I am especially interested in the statement that the operation of vasectomy helps to restore the will power, and I hope to be able to test its efficacy in the near future. As to the value of education in lessening the propagation of defectives and delinquents, I am not very hopeful. That education is of very scant value in such matters is seen in the attitude of the medical profession toward the alcohol problem. Physicians as a class are well informed as to the baneful effects of alcohol on the individual and on society, yet among them we find very few total abstainers. If enlightened persons cannot be brought to total abstinence by education, how can we expect to educate a defective or delinquent to abstain from sexual intercourse or from propagation?

DR. J. N. HURTY, Indianapolis: I have watched the progress of this work with a great deal of interest. I do not think that we have any figures as yet showing that much in a direct way has been accomplished; but I believe that this may be termed a higher hygiene, through which we can hope to better the race. It is futile to educate these people with criminal stigmata. You can't do it. Education does not reach them at all. They have little moral sense, little moral force, and while you can tell them, and they can in turn preach to you the morals of the situation, they will go straight off and commit the acts. They have no will power, no force of mind, to withstand temptation. So education will not reach them. The knife only can reach them. I was at Mr. Vanderbilt's estate at Asheville. He raises all manner of animals there—cats, hogs and dogs—of many varieties. I was standing near the man who was in charge of the beautiful collies at the kennels; one of them (a female) came up to me, and she looked so pleasant that she seemed to me to have a laugh on her face. I patted her on the head, and she was duly grateful for the attention. I asked him, "Do you have any vicious dogs here?" He said: "Do you suppose that we would breed from vicious animals? If a vicious animal appears here we kill it; we have nothing to do with them at all; and the result is that we have no biting animals, but only those amenable to instruction." Why cannot we apply this to the human family? It seems to me that the application is possible; and I would not term it inhuman. It could not interfere with man's rights. A person who is morally defective has no right to impose another defective on the human family. We take from them their lives when they are murderers—hang them, electrocute them—and it is not nearly so severe to take from them their right to procreate. It has already been shown that there are many of this class who prefer not to procreate and voluntarily submit to sterilization.

DR. W. FORREST DUTTON, Walker's Mills, Pa.: I should like to have Dr. Hurty define the limits of this class. That is to say, What is meant by defectives in the broader sense of the word?

DR. J. N. HURTY, Indianapolis: That would be difficult, indeed. At the present time I would confine vasectomy, if we adopt that method, to those convicted in the courts. We could not extend it further at present; but science may advance some time in the future so that all could be reached. The law in Indiana says that the man shall be examined; if he is found unfit, and has the stigmata of degeneracy, then he is sterilized. The method is not prescribed; any method may be used. That is about as far as we can go at the present time.

DR. HARRY C. SHARP, Indianapolis: In tuberculosis, of course, we are not dealing with a defect. There are families that have low vitality; and it seeems to me to be transmitted from one generation to the other. As to the danger of vasectomy becoming popular with a certain class, I fully comprehend that; and I think we should have on the statute books of every state (and we in Indiana realize this since the matter has become so generally understood) a law attaching criminal indictment to any one submitting to this operation or performing the same without due process of law which would be binding. The statement that no one voluntarily gives up the power of procreating, is, in the face of facts, entirely wrong. Many women in this country, and a great many more in Europe, particularly in France, have submitted to major surgical operations in order to avoid procreation. We are all human beings, and we are all submitted to temptation. The one who is normal withstands the temptation; and the one with weaker powers of resistance succumbs. The present law in the state of Indiana, and the only one I think justifiable now, is the one dealing with people in the public institutions. They may have committed crime; they may be in our poor asylum, orphans' homes, insane asylums,

or institutions for the feeble-minded. I stated in dictation of my paper (its omission was an oversight of my stenographer) that while the apparent increase in France is not borne out by facts, the definition of crime has been materially extended in several fields; law has been more vigorously enforced. Furthermore, regarding insane asylums, heretofore people have kept their afflicted relatives at home, now they put them in public institutions. All those things contribute to show an increase in criminals and defectives; nevertheless, the actual increase is out of proportion to the increase of population.

I began this work in October, 1899, and from 1899 to 1907 this operation was done on 176 men in the Indiana Reformatory on request. The request was solely for the purpose of relief from the habit of masturbation, and I will give as an illustration the story of my first operation, in October, 1899. A boy 19 years old came to me and asked that he be castrated, as he could not resist the desire to masturbate. I first had him put in a cell with a fellow inmate, thinking that perhaps he would be abashed and the sense of shame would prevent him. He came to me again, still insisting on castration, saying it was just as bad as ever. I did the operation, and two weeks afterward he came to me and said I was just fooling him, that I had not operated on him and he wanted the other operation. I asked him to wait two months and then, if he was no better, I would perform castration. In two months' time he came to me and told me he had ceased to masturbate and that he was all right. I asked him if he had lost any desire or pleasures of the gratification. He said: "No, but I have the will power to restrain myself." That institution conducted a school of letters. This patient was unable to make any progress in the school. Three months after that operation he made satisfactory advance in the school. This was true, practically, of every man operated on; every man who has ceased to masturbate has assigned the same reason: practically every man has told me he sleeps better, feels better and has a better appetite. In that institution the men are sent out on parole. We have satisfactory and unsatisfactory paroles. That is, those men who violate their parole and are brought back to the institution, "jump their parole" (as it is termed), which means that they leave their place of employment and run off. About 65 per cent of the average of that population are satisfactory paroles; that is, of the number of men who are paroled, 65 in 100 receive their final discharge as "satisfactory"; 35 are either returned or leave their place of employment. My last report indicated 203 of the paroles in these men who had been operated on in the last ten years, and 5 of that 203 were unsatisfactory. Since this law was enacted, of course, we have been doing the operation by means of a commissioner appointed. The man's ancestry is inquired into. If the man has had syphilis he is not considered a fit subject to procreate, and he is sterilized. Any man in a criminal institution, when told that he is to be operated on, resents it; so that all these men we have operated on resent it at the time; but subsequently they approve. I have operated on three physicians, and they have all assured me that they have a decided lessening of muscular and nervous fatigue.

The Histology of the Posterior Lobe of the Hypophysis.—Just behind the posterior lobe of the hypophysis, W. Haberfeld (*Anat. Anz.* Sept. 1, 1909, xxxv 98) finds in the human fetus a peculiar structure, the persistence of which might cause some confusion in a post-mortem diagnosis of glioma of the hypophysis. On the Cohnheim theory, this group of cells also affords an explanation of the embryonal rest from which a glioma of the hypophysis would arise. It occurs almost constantly in the fetus (in 5 out of 6 cases) and the new-born (10 out of 11 cases), is about one-fourth the size of the posterior lobe, and is usually found behind and a little below the posterior lobe. The body is made up of very typical glia cells and usually contains a lumen lined with ependymal cells that have very fine cilia. There is no sharp line of division between the glia tissue and the ependymal cells. This body has not been found in the adult or in children older than 3½ months.

THE EFFECT OF INTERCURRENT DISORDERS ON PRE-EXISTING EPILEPSY *

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In the summer of 1899 my attention was first directed to the effect which intercurrent troubles have on epilepsy and mental diseases. At that time, a small epidemic of measles appeared at the State Hospital for the Insane at Independence, Iowa, and, among others, six epileptics acquired the disease. These patients were not under my direct charge, but I saw them frequently, and it was my opinion, as well as that of Dr. Joseph Ohlmacher, in whose immediate service they were, that their convulsions were lessened in number. This opinion, however, was based merely on general observation, and there are no definite records to support it.

The next year, during a prolonged epidemic of typhoid fever, a large number of epileptics became ill, and on the study of these patients my paper is chiefly based. As opportunity offered since that time, I have kept a record of other cases so that now I have notes on a considerable number of epileptics who developed measles, scarlet fever, tonsillitis, pneumonia, grip, gastrointestinal disorders, and pregnancy, or who sustained various injuries, but in nearly all the short duration of the illness, the relative infrequency of the seizures, and the lack of any definite knowledge as to the number of seizures when the patient's general health was good, have prevented me from drawing any positive conclusions, and such cases have been eliminated.

Inasmuch as attacks of petit mal, especially in a large hospital for the insane, are not likely to have been carefully observed in individuals during a state of health, not much has been said here about them. The same is true of psychic equivalents. It is worthy of note, however, that during the typhoid epidemic the patients were carefully observed both day and night by more or less competent nurses, whereas their records previously had been kept by attendants who were by no means always competent or careful. Such error, therefore, as may be due to inaccurate observation is wholly on the side of the contention of this paper. In almost every instance, the bromids were discontinued during the period of acute illness and begun again during convalescence. Abstracts only of histories are given.

CASE 1.—*Summary.*—Patient, man, aged 40, single; three cousins were insane. Epilepsy began at 7 years of age; patient sent to the state hospital at 25. Gradual mental deterioration. Severe attack of typhoid in 1896; pleurisy in 1898 and typhoid again in 1900. Previous to latter, three or four major convulsions a month in addition to occasional attacks of petit mal. During forty-six days of typhoid one light convulsion. Toward the end of convalescence, a remarkable diminution in the frequency of respiration. About a year later, another prolonged period of this respiratory disturbance. Subsequent to recovery, convulsions about the same, but mental deterioration more rapid.

History.—Family history was little known except that two cousins on the mother's side and one on the father's were insane. The patient's general health was good so far as known. He had a good common school education; never used liquors to any extent.

Present Disease.—The patient had epilepsy (both petit and grand mal) since 7 years of age. When 24 years old, his mind began to show signs of failure, and the next year he was sent to

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* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Sixtieth Annual Session, held at Atlantic City, June, 1909. Considerations of space compel the abbreviation of this article in THE JOURNAL by giving parts of the case reports in abstract. The complete article may be found in the Transactions of the Section and in the author's reprints.

the state hospital. At that time he usually had from three to twelve fits within a period of thirty-six hours, and then there was an interval of two to four weeks. A stomach aura was usually present. For three weeks before admission he had been sleepless, irritable and despondent; had threatened to cut his throat, and it was feared that he would do violence to others. At times imagined himself in hell, and again thought he was in heaven. He was first admitted to the hospital in 1886, and remained there most of the time subsequently. At first he was pleasant and fairly bright, but as time went on he became more irritable and demented and excessively religious. He had from 1 to 8 severe epileptic convulsions per month, the average being about 3 or 4. In addition to this, there were occasional petit mal seizures.

In 1896 he had a severe attack of typhoid fever. There is no record as to the number of epileptic seizures during this illness, but it is noted that during convalescence he had them very frequently. In 1898 he had an attack of pleurisy, lasting three weeks. On July 27, 1900, he was again taken ill with typhoid. His attack was unusually severe and lasted six weeks. During the first twelve days, his temperature was usually 104 to 105, and the highest records, 105.8 and 106, were charted on the ninth day. The nervous symptoms were pronounced throughout. During the greater part of the high febrile period, he was delirious and had a marked tremor, and up to the end of his illness he was greatly confused. He had a very well-marked peripheral neuritis, and for four weeks had albuminuria but no casts. The Widal reaction was first obtained August 2. From August 6 to 10 he was very ill, with low muttering delirium, and his death was daily expected. On August 12 he seemed a little better, and from this time he slowly improved. He had a short epileptic attack with slight convulsive movement August 24. At that time his temperature ranged from 99 to 102, pulse 90 to 110, and respiration almost normal. At the end of August his temperature was practically normal, pulse 85 to 105, and respiration a little above normal. September 1 his temperature went to 101.5. There was then a steady decline in temperature and pulse so that at midnight of September 3 his temperature was 95.8, pulse 90, and respiration 18. Six hours earlier his respiration had been 34. From September 3 to September 8 his temperature slowly rose till on the latter date it was normal. From September 4 to 6 his respiration was from 16 to 18, but on the morning of September 7 it was 5 per minute; at noon, 8, and at 6 p. m., 12; September 8, respiration at corresponding hours, 16, 8 and 10; September 9, 6, 8 and 8; September 10, 6, 7 and 5; September 11, 5, 4 and 4. During this time he slept soundly at night, and even during the day was often found in such deep sleep that it was difficult to arouse him, but aside from this somnolence and his respiration, nothing unusual was observed in his condition. He was considerably emaciated, but was on light diet and was gaining in weight. At 5 a.m. on the 12th he had a severe epileptic seizure, and at 6 a. m. his temperature was 98.8, pulse 88, and respiration 18. At 9 a.m. he had a second severe convulsion, and from this time up to September 17, when he was discharged from the sick ward, his temperature, pulse, and respiration were practically normal. It is worthy of note that though at the time he was taken ill, his respiratory rate was normal, it rose steadily from that time until, on the sixth day of his illness, it was 56, and for ten days thereafter it was in the neighborhood of 40 to 45 nearly all the time, and this without any apparent pulmonary complication. The record of his epileptic seizures for the months preceding and following his illness is as follows: April, 1900, 4; May, 1900, 1; June, 1900, 4, and for twenty-seven days in July, 4. Then there ensued a period of forty-six days during which he had but one very slight attack. In October, 1900, he had two attacks; in November, 3; December, none; January, 1901, 4; February, 1; March, 10.

After he became convalescent, and up till January, 1901, his general condition seemed somewhat improved, but after that time he became worse mentally, was more silly than he had ever previously been, and the attacks of depression which had preceded his illness were succeeded by periods of mild excitement. His weight August 31, 1900, was 101½; by January 1, 1901, it had reached 142½, and on March 31 it was 143½. In April, 1901, he is described as being much more stupid than before, and spending much of his time asleep in his room. His seizures had ranged from one to eight per month in the interval, but were on the average a little more frequent than before the attack of typhoid. In June he was sent to the sick ward on account of his stupidity and "queer feeling" which he had in his head. When received there, his temperature, pulse and respiration were normal, but two days later his respiration again became slow, and during the next four days ranged from 6 to 14 per minute. There was no other change in his condition during this time except that he was very stupid and unusually religious even for him. After coming to the sick ward, he had no bromid, though he had had it previously. On June 12, after praying constantly for fifty minutes, he had a severe seizure at 3 a. m. On June 13 he had two seizures, and on the same day his temperature rose without apparent reason to 102, falling shortly afterward to normal. These seizures had no effect in increasing the rate of respiration. Throughout the remainder of June, all of July, and up to the middle of August, his respiration continued slow, rising gradually during that period from 6 to 12 per minute to about 14 to 20 a minute by the middle of August. He was very greatly disturbed mentally; thought he was to be killed on account of some religious matter, and believed himself cured of epilepsy by the direct intervention of God, though he was at the same time having more numerous seizures than at any previous time of his life. At the end of 1903, he is described as having failed considerably mentally.

CASE 2.—*Summary.*—Patient, man, aged 26; single; no occupation. Paternal grandparents defective mentally. Epilepsy began at 17, and mental deterioration was noted a year later. On Sept. 1, 1900, he developed an attack of typhoid fever lasting seven weeks. Albumin and casts were present with very marked irregularity of the pulse. For five months preceding he had an average of fifty-four seizures a month. During the fever he had 3 attacks; in the ensuing three months he had 5, 11 and 10 seizures, respectively.

CASE 3.—*Summary.*—Patient, man, aged 27; single; family history negative; at 10 years sustained a severe compound fracture of the skull with considerable loss of bone in the frontal region. Six years later a convulsion followed an attack of scarlet fever. Attacks continued, and at 22 patient was trephined. He was admitted at the state hospital at 26; was irritable and demented. August 2 he went to sick ward with typhoid, which lasted about four weeks. Temperature was 103 to 105.8. Albumin and casts were present. Previous to typhoid, attacks came from four to fifteen per week. There were none during illness and, in month following, seventeen.

CASE 4.—*Summary.*—Patient, man, aged 29; single. Epilepsy for ten years. Mental symptoms well marked, but few convulsions. No attacks during a mild run of typhoid. A subsequent attack of acute articular rheumatism with some mental improvement.

CASE 5.—*Summary.*—Patient, man, aged 37; married; farmer. Father drank; an uncle was alcoholic and insane. No record of date of onset of epilepsy. Insane four years. A prolonged attack of typhoid in August, 1900, with pleurisy and pulmonary tuberculosis. No seizures during two months of illness and some improvement in general mental condition. Change not permanent.

CASE 6.—*Summary.*—Patient, man, aged 22; single; family history unreliable but probably negative. At 16 months of age, following an injury to the head, patient began to have attacks of petit mal, followed later by grand mal; he was admitted at the state hospital in March, 1900. He was in very fair physical condition, but was much demented. He averaged from three to seven convulsions per month when taking bromid, and, in addition, had occasional attacks of mental excitement. In August, 1900, he developed typhoid fever which ran a relatively short course from the date of its recognition, with temperature of 100 to 104. During his illness, the convulsions were about as frequent as formerly, and attending them there were some striking variations in temperature and pulse. Slight improvement mentally and physically during and after convalescence, but no permanent change.

CASE 7.—*Summary.*—Patient, woman, aged 24; single. Maternal cousin epileptic. Epilepsy began at 8½ years. Marked mental deterioration appeared at 15. At 24, patient developed typhoid fever, complicated by pneumonia, otitis media and frontal sinus trouble (?), and running a course of eleven weeks. Seven seizures during her illness, but only one positive attack during the continuance of high fever. Increased mental deterioration and number of seizures after convalescence.

CASE 8.—*Summary.*—Patient, man, aged 31; single. Family and previous personal history negative. Epilepsy appeared at 13. Second admission to state hospital May, 1900. Patient was demented and in rather poor physical condition. August 14 he was found to be ill with typhoid fever, and died twelve days later of intestinal hemorrhage. No seizures during his illness; from ten to twelve per month previously.

CASE 9.—*Summary.*—Patient, man, aged 41; single. Insanity and epilepsy on father's side. At 9 years of age, epilepsy developed. Patient admitted to the state hospital at 34; was irritable and demented. Attacks of grand mal, averaging fifteen to twenty per month. Chronic bronchitis and asthma for some time. In September, 1900, developed typhoid fever, and died on the thirteenth day. No convulsions during his illness.

CASE 10.—*Summary.*—Patient, man, aged 22; single. Epilepsy since 4 years of age. Epileptic attacks frequent, and dementia well marked. In September, 1900, patient developed typhoid fever, and nine days later died of typhoid and croupous pneumonia. No seizures during his illness.

CASE 11.—*Summary.*—Patient, woman, aged 23; single. Epilepsy began at 3 years and continued to her death. In her twenty-third year patient developed typhoid fever and died in the midst of the typhoid in status epilepticus.

History.—Father living and well at 64; drinks moderately. Mother living at 54; has been an invalid for years with some condition causing contraction of the arms and legs. No history of insanitiy, epilepsy, tuberculosis, or cancer in the family.

The patient was as bright as the average for the first three years of her life, and had good health. Menstruation began at 13, and was normal at the time of examination.

Present Disease.—At 3 the patient began to have epileptic fits, from one in three or four months to three or four a day. During the past five or six years previous to admission, the fits were worse at the menstrual period; there was some mental failure for three years, but for four weeks previous to admission, deterioration was very rapid. There had been no convulsions for two months before admission. The patient was incoherent in conversation; appetite poor; slept well; admitted to the state hospital April 22, 1902.

Examination.—Physical condition was negative except for enlarged uterus and increased deep reflexes. Most of the time the patient was quiet and drowsy; occasionally was restless. Her speech was somewhat incoherent; at times drawling and characteristically epileptic; orientation impaired; intellect, memory and mental reaction only fair. She was irritable, confused, and at times emotional; wanted to go home, and said that she was sent to the hospital to die; thought that everyone discriminated against her, and that she was treated badly. She did not want to eat, as she thought that prevented her recovery. During the remainder of April following her admission, she had seizures almost every day; in May, had 24 day seizures, and 4 at night; during June, had 5 seizures in the daytime and 10 at night; was growing constantly more confused. On July 1 she had 3 attacks; on the 2d, 2; on the 3d, 2; on the 4th, 3, and on the night of the 5th, 8. At 8:30 on the 6th she had a convulsion, and this was repeated at 9, 9:30, 10, 10:30, 10:40, and 11:15. Between 11:15 and 12 m. there were five seizures, and from 2 p. m. they occurred every fifteen or twenty minutes, and she died at 4:20 p. m. in status epilepticus.

Autopsy.—This revealed an acute splenetic tumor, recent ulceration of Peyer's patches, enlargement of the abdominal lymphatic glands, and a few hemorrhages into the lungs. A culture from the mesenteric glands showed a pure growth of typhoid bacilli.

CASE 12.—*Summary.*—Patient, woman, aged 19; single. Three brothers had epilepsy. Patient developed epilepsy at 6 years of age, and the disease continued to her death from tuberculous bronchopneumonia at 19. Seizures were about one per day previously to, but much less frequent during her last illness, and entirely absent during last four weeks. At the postmortem examination it was found that, in addition to tuberculosis, she had disseminated cerebral sclerosis.

CASE 13.—*Summary.*—Patient, a boy, aged 11; schoolboy. Alcoholism and insanity in the family. Hemiplegia at 14 months, following an injury to head. Directly after, patient began having convulsions, limited to one side, at first infrequent but later coming as often as three or four per month. At 6, he had a severe attack of typhoid, and after this no more convulsions until at 10 years he had an attack of scarlet fever, after which convulsions reappeared and occurred once or twice a month. Following circumcision and bromid treatment, attacks ceased for eight months.

Family History.—Paternal grandfather drank moderately; father drank to excess at times. Mother died at 37 of consumption; had been insane for two months. One sister was "nervous" preceding her confinement. History otherwise negative.

Personal History.—There was no trouble at patient's birth. He was unusually healthy as a baby. At 14 months, he fell from a chair and hurt his head. There was no external sign of injury. Immediately following this, he had a partial right hemiplegia and shortly afterward began to have fits which were limited to the right side. Each convulsion lasted about ten minutes, and they averaged about one a month. He would become unconscious, fall over, and bite his tongue. Before the accident he could say a few words and could walk, but after it he did not speak or walk for six months. He is now left-handed; before the injury was right-handed. At 6, he had a severe attack of typhoid fever, and was in the hospital for six weeks. Following this he had no more convulsions until he was 10, when he had an attack of scarlet fever, after which they began again, still limited to the right side.

Examination.—When first seen, Sept. 20, 1905, the patient was well developed and well nourished. There was nothing unusual in the formation of head or face. The left hand and arm were distinctly larger and stronger than right; there was practically no difference in the legs. The right pupil was one-quarter larger than the left; the pupillary reflexes were normal. The deep reflexes were slightly greater on the right than on the left; no Babinski, and no Romberg. The foreskin was much elongated and constricted. Physical examination was otherwise negative. The patient was a little slow in responding to questions, and was not quite as bright as other children in school, but the mental defect was not great. Convulsions were occurring from once in two weeks to once a month.

He was referred to the surgical clinic, where a circumcision was done, and he was at once placed on a bromid mixture. He remained under treatment eight months, during which time he had no convulsions, and according to the testimony of his father and his teachers, he was much better mentally.

CASE 14.—*Summary*—Patient, woman, aged 31; married; housewife. Family history negative except that her father showed slight evidence of dementia. Epilepsy began at 17, and eventually she had attacks once or twice a month except during each of seven pregnancies, when they wholly ceased.

Family History.—Father died of an accident at 70; a case of mild senile dementia. Mother died at 68; cause unknown. Five brothers died in childhood; exact cause not stated, but it is said that they had no convulsions. One brother and five sisters are living and well.

Personal History.—The patient's general health was good in childhood; at 2, she had severe diarrhea following teething, but had no convulsions. Since then she was never ill except for the epilepsy. At 13, menstruation began. It was regular, but less in amount than is usual. At 14, she began to do housework and has worked hard ever since. She was married at 20, and has had two miscarriages and five living children. One of the latter died of pneumonia, one of enteritis, and one of "spasms." The two remaining are healthy.

Present Illness.—When about 17, the patient caught cold immediately following the onset of a menstrual period, and the flow ceased; she then had her first convulsion. She cried out, whirled around two or three times, and then fell over backward; bit her tongue, and was unconscious for over half an hour. A second attack occurred a month later. Since then she has had them about once or twice a month except during her pregnancies. The attacks always come on during the night or as she is getting up in the morning. Sometimes there is an aura, "something rushes up into my head;" often there is none. The attack is always preceded by a cry; sometimes by the shaking of the hands. She falls over; has convulsive movements, bites her tongue; froths at the mouth; passes urine, and is completely unconscious. With the beginning of every pregnancy the seizures have ceased and have not returned until after delivery, shortly after which they begin again. They do not appear to have been unusually frequent following the intermission. The physical examination is entirely negative except that the patient has a lacerated cervix and perineum and gonorrheal urethritis.

CASE 15.—*Summary.*—Patient, woman, aged 45; married; occupation, housework. Family history negative. Epilepsy began at 26 during her first pregnancy. She has been pregnant four times since, and each time her epileptic attacks have recurred, though she was entirely free from them in the interval. The patient is now demented as well as epileptic. She was seen Aug. 12, 1908, with the permission of Dr. W. M. Chowning.

Family History.—Negative so far as learned. Father and mother died of old age. One brother and a sister are living and well.

Personal History.—The patient was married at 26, and up to that time had been perfectly well. One year after marriage she gave birth to a child. When her pregnancy was three months advanced, she had her first convulsion. She was sitting in a rocking chair, became unconscious; fell over; bit her tongue, and her entire body jerked. After delivery she had no more convulsions until she became pregnant a second time, and another child was born two and one-half years after the first. She had six or eight seizures during this pregnancy. Two years later a third child was born with a similar experience on the part of the mother during that pregnancy. During the fourth pregnancy she had an increased number of convulsions, and also began to show symptoms of intellectual deterioration. At the time of the taking of this history, the youngest child was two years and two months old, and the mother was again three months pregnant. She had no convulsions during the interval, but since the beginning of the pregnancy had had six major epileptic attacks.

She was a well-nourished woman, apparently in good general health, but she had a low and narrow brow and dull, heavy expression. Heart and lungs were normal; arteries moderately thickened; patellar reflexes normal. Pupils were equal and reacted normally to light and distance. The patient was evidently not only an epileptic, but considerably demented. That she should remain free from the attacks in the intervals between her pregnancies seemed almost incredible, but careful questioning failed to elicit any evidence of either petit or grand mal during that time.

CASE 16.—*Summary.*—Patient, man, aged 57; hardware merchant, and single. Family and previous personal history negative. Epilepsy began at 32 years of age. At 44 patient had an attack of mental depression with some confusion, lasting about eighteen months without cessation of the convulsions, which occurred from once a week to one every month or two. At 55, he sustained a fracture of the ankle. For two years afterward he showed great confusion, but had no convulsions.

Family History.—Father died at 79, of old age; mother, when comparatively young, of unknown cause. Two half-brothers are living and well. So far as known, there is no other cas of insanity, epilepsy or other nervous disorder in the family: no tuberculosis.

Personal History.—The patient was a strong and healthy boy, and aside from his epilepsy had little sickness throughout his life. He used beer and whisky in moderation. He never married. A good many years ago he entered the hardware business, and was able to continue in charge of his store up to 1889, when he was sent to a hospital for the insane.

Present Illness.—In his thirty-second year he awoke one morning to find his tongue sore, his pillow bloody, and his "stomach very much upset." The first positive attack of epilepsy occurred several months later. Shortly after retiring, he fell out of bed in the midst of a convulsion; was unconscious, and bit his tongue severely. A physician was called, and pronounced it "stomachal epilepsy." Attacks occurred at intervals ever since; at first, always at night. For some years he would go for two to eight months without an attack; later, they came much more frequently. He was first admitted to the state hospital Aug. 31, 1889. It was then stated that his mental trouble had been present a little over a week, and it was diagnosed as "acute melancholia." The cause ascribed was "disappointment at the marriage of an adopted niece." When first admitted he was greatly depressed; would not answer questions, and ate very poorly. A couple of months afterward, he is noted as being a little worse, forgetful, and confused. A few days later, a well-marked tendency to suicide appeared. On April 22, 1890, he was taken home "somewhat improved." He was returned on June 2, his mental and physical condition about the same as when discharged. He remained at the hospital a few months, and improved sufficiently to be able to go home again. Later he spent some time in the county hospital, and then was home again for a period of five years. He had never had a guardian appointed when he was at home, and was at least in nominal charge of his business. He was by no means well, however; had convulsions at intervals, ranging from a week to a month or two, and at times talked to himself, and was restless and uneasy. In August, 1902, he became unusually restless, ate little and slept badly. One night he broke the screen from his window and jumped from the second story to the ground, fracturing his left ankle. For two or three days after the injury his mind seemed perfectly clear. He then became greatly confused, and in this condition was sent to the hospital Aug. 26, 1902. There had been no seizures since the accident.

Physical Examination.—The patient was a small man, fairly well developed, and well nourished, with nothing unusual in the conformation of the head. There were many pimples on the skin over the shoulders. The left ankle was fractured. The heart, lungs, and abdominal organs were apparently normal; the radial arteries not thickened. The urine was negative except for the presence of a few leucocytes and red blood cells.

Mental Condition.—The patient's face had a pleasant but rather dazed expression. He entered at once into conversation, but was very much confused; often began, but rarely completed a sentence; seemed to lose the idea before he had fully expressed it, and even when it was recalled to his attention, he was unable to take it up again. He knew that he was at the hospital at Independence. It seemed to him that he had been there before, but he could not say; he was uncertain. When asked how he came to be here this time, he answered: "Well, he said he wanted me—the man that brought me. He said he would take me back there. I suppose they'd let me go again, wouldn't they? The strangers that brought me here?" When asked if he liked it there, he replied: "Well, I guess so far—I guess—well, I don't know. I think I'll be able to walk on that before long, won't I [pointing to leg]? I suppose likely——" [considerable delay and he was asked what he meant to say] "I suppose it was all right for me to come here, wasn't it? They brought me here—something the matter with my leg or something. I don't know." [Picked at his nose and stared around.] "Well, I suppose that I'd be right here, wouldn't I?" When asked the date, he hesitated considerably; finally gave it as '92; thought the month was August, but could not go further. After a little delay, he named the president and governor correctly.

Course of Disease.—For two years after admission this man was under my care, was closely watched by nurses both day and night, and during that time he did not have an attack of epilepsy or anything resembling one. For a time after admission, he became more and more confused, and finally this reached such a degree that it was scarcely possible to get any

meaning from his disconnected words. It was apparent, however, that he was constantly dominated by the idea that he had done something wrong for which he must make reparation. He would try to speak to the doctor about the matter every day during the period of his detention, yet if given time to explain his case, he became so greatly confused that it was impossible for him to formulate even the simplest sentence. His leg healed slowly, but his general health was good. At the end of two years he passed from my observation, but during his last three months he seemed a little less confused and somewhat more cheerful.

CASE 17.—Patient, man, aged 28. Sister epileptic. Patient had epilepsy nearly all his life; he was irritable and, in later years, demented. He was admitted Oct. 18, 1897, in status epilepticus. He was unconscious, with frequent seizures; died Oct. 21, 1897, from pneumonia. His temperature was 101 to 102.2. The anatomic diagnosis was: atheroma of aorta; mitral stenosis; croupous pneumonia; cloudy swelling of the liver; scars from former trephine operation; adherent dura mater; thickened pia mater; sclerosis of cornu ammonis.

CASE 18.—Patient, man, aged 25, who had had epilepsy since 4 years of age, following measles. No other statement was given as to etiology. Patient was admitted Sept. 23, 1900; died Nov. 2, 1900. Physical examination, at admission, was negative. Patient was much demented; had frequent seizures. October 29 he developed status epilepticus with axillary temperature of 104.2. From this until death, temperature continued high, reaching 108 (axillary just before death). During all this time he was having frequent seizures. Clinical diagnosis was: Status epilepticus with croupous pneumonia. Anatomic diagnosis was: right lobar pneumonia; hypostasis of both lungs; enteroptosis.

That bodily diseases, and also certain physiologic processes, exercise a profound influence on epilepsy has been recognized from the time of the earliest medical records. There is frequent reference in literature to Hippocrates'[1] statement that acute fevers can influence epilepsy both favorably and unfavorably, and, according to Beckhaus,[2] Plato has stated that lepers are free from convulsions. Lanzoni,[3] in 1691, reported the case of a woman who, during three pregnancies, each time had fits twice per month, and was free from them on all other occasions. De la Motte,[4] in 1740, records the case of a woman who became pregnant three times with boys, each time having convulsions, and five times with girls, with no convulsions. This case also developed about 1690. Both cases have been more or less discredited as being possible instances of eclampsia, the albumin test at that time being unknown. Their description, however, certainly does not suggest hysteria, and it does not seem likely that any one could have passed through so many attacks of eclampsia without a fatal result. In 1803 Maisonneuve[5] reported a man who became epileptic after fright on account of a dog-bite. The fits ceased during an attack of intermittent fever, reappearing when the fever was cured. Gérard,[6] in 1846, reported the case of an epileptic girl of sixteen who had about five or six fits per month. She passed through five attacks of intermittent fever, but each time the fits ceased, only to reappear when the fever disappeared.

In 1854, Delasiauve[7] made the first systematic attempt at a collection of cases, and, as a result of his observations, came to the conclusion that practically all severe and acute illnesses suspend or weaken the fits, especially in young epileptics with frequent attacks, this modification being more or less durable, and that chronic ailments diminish rather than abolish the attacks. He also pointed out that, in some cases, the epilepsy persists in spite of intermittent conditions, and may even be made worse by them. Since Delasiauve's time, a voluminous literature has grown up, but much of it consists of reports and observations on isolated cases, on account of which some widely differing opinions have been expressed. Thus, Lannois,[8] as recently as 1893, on the basis of a single case in which, in an epileptic infantile hemiplegic, erysipelas was accompanied by complete suspension of fits, and typhoid fever a little later in the same individual was accompanied by an increase in seizures, was able to come to the definite conclusion that, though intercurrent disorders have frequently a suspensory or curative effect on epilepsy, typhoid must be excluded from the list. In 1857, however, Schlager[9] had reported a case of epilepsy with mental disturbance in which typhoid caused the epilepsy to disappear, and in 1865 Wille[10] stated that the fits ceased during typhoid, but on complete recovery returned with increased severity. Wagner,[11] on the contrary, thought that epileptics were unfavorably influenced by typhoid. In very recent years, several men, such as Friedländer,[1] Séglas,[12] Béraud,[13] Beckhaus,[2] and Pelissier[14] have made more or less extensive collections of cases of intercurrent diseases and of pregnancy in epilepsy, and the opinion of practically all is that during the intercurrent trouble the influence is favorable in most instances, but that afterward the fits are often increased. Indeed, at one time the favorable effect of these conditions on epilepsy as well as insanity was so widely recognized that it was seriously proposed to infect epileptic and insane patients with various diseases; injections of turpentine and sterilized cultures of various bacteria were used a number of times with the hope of producing artificially the effects secured by accidental inoculation, and it was prophesied that some day such means of curing patients, including the building of hospitals for epileptics in malarial regions, would be generally employed.

In addition to the diseases already mentioned, epilepsy is reported to have been favorably influenced by pneumonia, scarlet fever, measles, whooping-cough, loss of blood, and skin eruptions, including the itch, while the favorable influence of traumatic experiences such as wounds and burns, to say nothing of operations, is very widely known. Clarke and Sharp[15] report their experience with epilepsy in twelve cases of measles, German measles and erysipelas, and strongly emphasize their belief that there is little improvement in the epilepsy accompanying these diseases, and that such improvement as is found is not permanent. So far as I know, however, practically no one contends at the present time that the effect of these intercurrent troubles is more than evanescent except in very exceptional cases.

In my series of cases, 11 patients had typhoid or typhoid complicated by some other trouble, and, of this

1. Quoted from Friedländer: Ueber den Einfluss des Typhus Abdominalis auf das Nervensystem, 1901.
2. Quoted from Beckhaus: Ann. d. Städtischen allg. Krankenhäuser zu München, 1890-92.
3. Lanzoni: Ephémérides des curieux de la Nature, 1691.
4. De la Motte: Traité de chirurgie, i. 1740.
5. Maisonneuve: Recherches et observations sur l'épilepsie, Thesis, 1803.
6. Gérard: Ann. méd.-psychol., viii, 1846.
7. Delasiauve: Traité de l'épilepsie, 1854.
8. Lannois: Rev. de méd., xiii, 1893.
9. Schlager: Oesterr. Ztschr. f. pract. Heilk., 1857.
10. Wille: Allg. Ztschr. f. Psych., xxii, 1865.
11. Wagner: Reprint from Jahrb. f. Psychiat., vii, 1886.
12. Séglas: The Influence of Intercurrent Diseases on the Course of Epilepsy, Paris Thesis, 1881.
13. Béraud: The Relation of Pregnancy and Accouchement to Epilepsy, Paris Thesis, 1884.
14. Pelissier: De l'influence des maladies infectiouses intercurrentes sur la marche de l'épilepsie. Thèse de Montpellier, 1898.
15. Clarke and Sharp: Med. News, Dec. 1, 1900.

number, 9 showed distinct improvement as respects the number of seizures; 1 was unchanged, and 1 died of status epilepticus in the midst of her attack of typhoid fever. One patient (Case 4) had no convulsions for three and one-half months after his attack of typhoid fever, and was better mentally for one year. In only one instance (Case 13) was there a fairly permanent favorable effect, and in several instances the seizures were really increased in and after convalescence as was also the rapidity of mental deterioration during subsequent months. An epileptic patient of one of the other physicians at the hospital in the same epidemic died of status epilepticus when well along in convalescence, though his epileptic manifestations had been much improved during the period of acute illness. Once tuberculous bronchopneumonia greatly reduced the number of supposedly epileptic attacks. Once typhoid caused cessation of the attacks, which were reinduced, four years later, by scarlet fever. Once pregnancy caused convulsions, and once it caused their cessation. In an old man with a severe traumatism, including fracture, a state of mental confusion was substituted for the attacks, and in two individuals dying of status epilepticus, pneumonia was also found. All the patients were more or less demented in addition to epilepsy, and none showed any permanent mental improvement. In most cases, there was more than the usual amount of mental dulness during the first few days of the typhoid, to be followed by some increase in mental activity in the midst of and toward the end of the disease. Didé[16] says that the convulsions are increased in frequency in the very early period of the typhoid.

As respects typhoid, therefore, my experience is very similar to that of most other writers. The effect, temporarily at least, is almost uniformly favorable, but there are exceptional cases in which the influence is negative (Case 6) or in which it is highly unfavorable and even produces status epilepticus (Case 11). One of Clarke's and Sharp's patients, when well along with measles, died of status epilepticus and pneumonia.

As a rule, the effect of the individual convulsions on temperature, pulse, and respiration was negligible, but in three instances it was quite otherwise. In Case 2 there was, at two periods of the illness, great irregularity of the pulse, lasting several days, both periods corresponding closely in time to the convulsions, though there may have been no necessary connection. In Case 1 there was a remarkable respiratory disturbance at different periods of the illness. At the onset, the respiration was normal, but, as the illness increased, the respiratory rate rose to from 45 to 56 without organic pulmonary disturbance, and remained elevated throughout the period of acute illness. When convalescence appeared to be fairly well established, the respiratory rate had about reached normal. On the forty-second day of the illness, however, it dropped from 16 and 18 on the previous day to 5, 8 and 12. The next morning it was 16, but dropped again during the day to 8, and 10, and on the two subsequent days varied from 5 to 8. On the following day, September 11, it was 5, 4 and 4. The patient was eating fairly well at this time and gaining in weight, and nothing unusual was noticed in his condition except the respiratory disturbance and an excessive somnolence. At 5 a. m. of September 12 he had a severe epileptic seizure, and at 6 a. m. his respiration was 18, and continued normal in rate thereafter up to June 7 of the next year, when it again dropped to 6, and during the next two and one-half months gradually rose to 14 to 20. Seizures occurring during this interval had had no effect on it. In Case 6, also, there was a marked disturbance of pulse and temperature in connection with certain of the individual seizures, but not of respiration, and the disturbance did not accompany all the seizures. Mivart[17] has reported an epileptic patient with the unusually slow pulse rate of 20 to 24.

Friedländer[1] says that there is only one authentic instance (Prieger's[18]) of a cure of epilepsy by typhoid fever. Case 13 of my list would certainly be accepted as a cure if the subsequent history of the patient were not known, for there was a period of four years following the typhoid with no attacks.

Béraud,[13] in his Paris thesis on the "Relations of Pregnancy and Accouchement to Epilepsy," states that pregnancy is not a cause of epilepsy, and that the uterine epilepsy of the ancients is the modern eclampsia. If we disregard the cases of Lanzoni[5] and De la Motte[4] already mentioned, Béraud's statement was probably correct at the time he wrote. In 1890, however, Gudder[19] reported a woman who suffered from epilepsy during both of her pregnancies, and at no other time. Case 15 of my list clearly comes in this group. There are also many cases in literature in which existing epilepsy was made worse by pregnancy, including one additional case of Gudder,[19] Chambrelet's case,[20] Terillon's[21] case, and others. Though there is still considerable dispute as to the usual effect of pregnancy, the opinion of most recent writers is that it is favorable. Thus, in a series of thirty-one collected reports of cases, Béraud[13] found 8 in which its influence was unfavorable, 8 in which it was negative, and 15 in which it was favorable. Of the latter, the suspension of fits was complete in 8 and partial in 7. It may be worthy of note that in one patient (Terillon's[21]), on whom pregnancy had an unfavorable effect, typhoid gave the same result, and in one (Boyé's[22]), in whom pregnancy caused cessation of the seizures, typhoid also caused cessation. In all of Béraud's[13] cases, the effect, if any, was evanescent. Also the effect in the same patient was uniform. Thus, if the first pregnancy caused the fits to cease, the same results always attend subsequent pregnancies. Pearce[23] reported an epileptic patient of Hirst's, with no convulsions from the third month of pregnancy up to nine months after the birth of the child; also three other women who had no fits during pregnancy, but with recurrence after labor; a fifth woman had five children and had no attacks while carrying them, though having an attack once in three weeks at other times. An ovariotomy on this woman had no effect in diminishing the seizures. A sixth woman had an almost identical history. In the same article, S. Weir Mitchell is quoted as saying that he had never seen epilepsy made worse by pregnancy; that, on the contrary, he has often seen it made better, or entirely cease for the period of pregnancy and even into the puerperium. Putnam[24] reports a woman with no seizures during pregnancy, and final cessation of fits.

As already mentioned, traumatism is widely recognized as having a profound effect on epilepsy, usually

16. Didé: Rev. de méd., Feb. 10, 1899.

17. Mivart: Lancet, London, Jan. 3, 1885.
18. Prieger: Heilung der Epilepsie durch Typhus, Allg. Ztschr. f. Psych., 1877, vii, 685.
19. Gudder: Quoted from abstract in Jour. Nerv. and Ment. Dis. January, 1892.
20. Chambrelet: Jour de méd. de Bordeaux, Nov. 5, 1899.
21. Terillon: Ann. de gynéc., 1881.
22. Boyé: Traitement de l'épilepsie. Thèse, 1882.
23. Pearce: The Protean Influence of Pregnancy on Idiopathic Epilepsy, Med. and Surg. Reporter, Jan. 2, 1897.
24. Putnam: The Relation of Pregnancy to Nervous Diseases, Am. Med. Quart., April, 1900.

making it better temporarily. I have not, however, found any case in literature in which the fits have ceased, to be followed by a state of constant confusion over a long period of time, as happened in Case 16. I have the record of an additional case in which, in a girl of 27, an accident almost identical with that in Case 16 happened, resulting in a fracture of both ankles. In this girl, the fits ceased for about two months and were succeeded by a state of confusion less well marked than in Case 16, but the previous history of this patient is so meager as not to render it certain that she had not previously had similar attacks even without traumatism.

Pneumonia, among other acute diseases, is mentioned as causing temporary cessation of fits. In a list of thirty-one epileptics who died of various causes at the Independence State Hospital, and in whom a subsequent autopsy showed croupous pneumonia, I could not find one instance in which it could be absolutely stated that the seizures were less frequent during pneumonia than at other times. On the contrary, there was a clear history of status epilepticus in eleven instances, as occurred in Cases 17 and 18, of which I have only a brief summary of clinical findings to accompany the autopsy records. There were several instances in which no fits occurred during the known period of pneumonia, but this always happened in individuals in whom the seizures were infrequent, and it was impossible to say that they were decreased in number.

How it is that intercurrent diseases can exercise this profound influence on epilepsy is almost as much of a mystery now as when the existence of the relationship was first recognized. It was perhaps but natural that the influence should have been ascribed by many, including Séglas,[12] Toulouse and Marchand,[25] to the fever and the febrile reaction, and favorable results obtained in thyroid feeding have tended to confirm this view. A careful study of cases, however, shows that the degree of improvement in no way corresponds to the height of the fever, and, though the rise in temperature may be a factor, there are certainly other and more important causes at work. The highest temperature recorded in any of my cases was 108, which occurred in Patient 18, who at the time was dying of status epilepticus. The association of high fever, pneumonia, and status epilepticus is certainly a common observation among those who have most to do with the care of epileptics. Friedländer[1] asserts that erysipelas exercises a more powerful and prolonged influence on epilepsy than does typhoid, though the febrile reaction of erysipelas is certainly not so high or so prolonged as of typhoid. Lannois[8] insists that it is not the febrile reaction which induces the change in epilepsy, but the presence of a special poison developed during the course of the intercurrent disease, and this seems the more probable view. It may be that the toxins developed stimulate metabolism—or it may be that in some way the invading toxins awake renewed resistance within the body, possibly in the manner described by Metchnikoff.

Assuming that the intoxication is the proper explanation, numerous attempts have been made by means of artificial inoculation to secure the desired effect, and the results have been uniformly less favorable than in Nature's method. My own most recent attempt was with the Wright method of vaccination. I employed this first with a cataleptic young woman who also had a severe attack of acne. In two days, following the injection of a sterilized staphylococcus culture, there was a very marked mental improvement. The patient got out of bed, walked about, talked fairly intelligently, ate well, and in all respects seemed greatly improved. In two weeks she relapsed completely, and a second and third injection had no mental effect, though the acne disappeared. It is altogether possible, therefore, that the mental change, at the outset, was merely a coincidence. The subsequent use of a typhoid culture in a manic-depressive case, the patient being in a state of depression, was also without effect.

Whether we accept the idea of toxins or of the rise in temperature, however, neither explains satisfactorily the effect of such physiologic processes as pregnancy, nor why typhoid in one person is accompanied by the cessation of seizures, and in another by status epilepticus; nor why pregnancy also can produce absolutely dissimilar effects under apparently similar conditions.

25. Toulouse et. Marchand: Influence des maladies infectiouses sur les accès convulsils épileptiques, Rev. de psychiat., March, 1899, No. 5.

ABSTRACT OF DISCUSSION

DR. AUGUSTUS A. ESHNER, Philadelphia: Dr. Weir Mitchell, of Philadelphia, had intended preparing a somewhat elaborate paper on this subject. He had received a number of reports from practitioners in various parts of the country in response to a circular letter, in which experiences were related, showing the inhibitory influence of intercurrent disease on the seizures of epilepsy, and I have gone over the literature for him, most of which has been detailed by Dr. Hamilton. Such an influence, usually temporary, though at times apparently permanent, has been observed since the time of Hippocrates. As Dr. Hamilton has pointed out, therapeutic attempts to control the convulsive seizures by means of the artificial induction of intercurrent disorders, have been made. Scabies has been induced artificially, resulting in a temporary suppression of the seizures of epilepsy. Brown-Séquard in the middle of the last century, noting an analogy between intermittent fever and epilepsy, suggested the development of intermittent fever for the purpose of restraining the seizures of epilepsy. Suggestions of a similar character have been made more recently. Lannois actually employed cultures of staphylococci by inoculation for the purpose of restraining the seizures, and he reports a certain measure of success. After him Marie advised the employment of potassium cantharidinate or some other product of cantharides.

Hessler, an American observer, reported the use of antistreptococcic serum in a series of cases, with good results. Turnowsky has recently reported three cases in which it was believed that permanent recovery from epilepsy was secured as the result of intercurrent pneumonia and scarlet fever respectively, and he seriously advised the exposure of cases of epilepsy to infection with these diseases. Dr. Hamilton has referred to the long list of diseases that appear to exercise an inhibitory influence on epileptic seizures. Typhoid fever has been observed most commonly to exercise such an influence, probably because we see typhoid fever more commonly than any other diseases in epileptics. All infectious diseases, all febrile affections, practically have been noted as exercising an inhibitory effect.

It is well-known that such a result often follows surgical interference undertaken with therapeutic intent. Burns, traumatisms, fractures, the introduction of setons have all exhibited a similar influence. It is difficult to assign an explanation for the influence of intercurrent disease on epilepsy, but Lannois believes that it is due to toxic activity. Dr. Mitchell expressed to me the opinion, and he wished me to voice it at this meeting, that the inhibition is exercised especially in cases in which there is cough. I believe his own observation was made in a case of whooping cough.

DR. M. L. PERRY, Parsons, Kansas: I think it is well to warn those who are inclined to take too hopeful a view of these cases that we should be careful about prognosis. In an experience of six years with epileptics and records of 800

cases we have seen a number of instances where we had temporary relief following various intercurrent diseases, but our records show no case of permanent relief; and it is well to bear in mind that these cases of apparent relief, if they are watched closely, will almost invariably recur, and we have little permanent benefit. I recall but one case of relief of several years' duration, and that was following a severe scald. I do not doubt but that in this case also, the patient being a hemiplegic, there was sooner or later a recurrence. We have had a considerable amount of erysipelas, the usual amount of pneumonia, etc., in our institution, and have noticed their effect in temporarily checking pre-existing epilepsy; but I think we should be very careful in the matter of prognosis, as those cases almost invariably recur.

DR. A. S. HAMILTON, Minneapolis: In the time at my disposal it has been impossible to read all of this rather lengthy paper and that may have led to some misapprehension. Certainly it was not my purpose to give the impression that permanent results could be expected from these intercurrent conditions and that has, I think, been pretty clearly pointed out in this paper. These are interesting observations and that is, up to the present time, all they amount to. Nevertheless, it seems to me that anything which is capable of exercising so profound an influence on convulsions as acute febrile disorders have been shown to produce, is worthy of consideration, and it may be that at a future time, a better knowledge of physiologic chemistry will enable us to take advantage of the therapeutic principle here involved.

BLOOD-SMEARS, THEIR PREPARATION AND STAINING

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The following article has been written to promote the greater use of slide blood-smears in diagnosis by pointing out simple methods of making them. The average physician will not make cover-glass smears; he will go without smears first. They are too tedious and difficult to handle. To illustrate the simplicity of the method of making and staining slide smears, let me say that the physicians in the receiving ward of the Cook County Hospital, working two at a time, and diagnosing from 100 to 200 cases daily, find time to make, stain and examine blood-smears by this method to help in differentiating typhoid, malaria, and miliary tuberculosis from occult (septic) pyogenic conditions, measles from scarlet fever, etc.

I wish, in the first place, to describe an excellent technic for making smears preparatory to staining them, which, though not original with me, I cannot find in the literature. It should be described in every text-book on hematology and clinical diagnosis.

Second, I desire to emphasize the fact that special cleansing preparations of slides and the skin surface for making smears are not necessary. This is exactly opposite to statements in text-books; and the time-saving element must appeal to physicians.

Third, I wish to show how to overcome difficulties in using the Harlow stain. Even the slight differences in technic in the method described from other well-known methods are all-important for success. Although not new in its details, the summary here given has been collected from many sources, carefully sifted out, tested by experiment, and the important features only are here dwelt on. Two points of special importance in the method here given are (1) the economy in the use of the Harlow stain, because one main objection is the expensiveness of the absolute alcohol used, and (2) the self-correction and future dependability of the stain.

METHOD OF MAKING SMEARS

A correctly made smear is of as much importance as the stain. To make broad, uniform smears and not to crush or to distort corpuscles and other elements, as well as to secure an even distribution of all the cellular elements, is the object in view. Use a good quality of glass slides, cleaned by breathing on them and rubbing off with a clean, dry, old linen handkerchief. I rarely find that any other preliminary cleansing or preparation of the slides is needed.

Cleansing of the ear-lobe with alcohol or anything else is likewise seldom necessary; certainly the rubbing creates a hyperemia and gets more blood from an anemic ear, but the lobe of the ear is rarely dirty or greasy enough to contaminate the exuding drop of blood. As an antiseptic precaution, cleansing is also unnecessary, since infection in the ear-lobe is a very remote possibility, and the usual cleansing methods are, at all events, superficial. It wastes the physician's time, and, worst of all, if the ear is left the least bit moist from solutions used, the blood-drop diffuses over the surface of the skin instead of standing up like a bead; the corpuscles are laked or agglutinated; and the resulting smear is worthless. Many physicians are inclined to blame the stain, when the whole trouble lies in the smear. Dropping the needle, or blood instrument, into alcohol after puncturing the ear is commendable, since it may preclude transference of a bacteriemia or contagion from one patient to another.

Probably the best mode of procedure to make slide smears is as follows:

Have two clean slides, A and B, ready. Stick the ear-lobe with a Hagedorn or similar cutting needle. No blood appears, as a rule, until gentle pressure is applied to the lobe. Touch center of slide A to the rounded drop of blood which exudes. Do not press the slide against the skin surface. Now grasp the right end of slide A, with blood drop on top, between thumb and fingers of left hand (palm of hand upward), and hold slide horizontally with its left end directed obliquely away from the body and projecting two-thirds its length over the radial border of the hand. Take slide B in right hand, apply one end to farther edge of drop and pull B back toward you about one-eighth of an inch. This is to make the drop spread by contact sidewise in the acute angle formed between the slides. Next, holding slide B in place, pull slide A steadily backward beneath it and toward your right until the slides slip past one another. The blood-cells adhere to the moving horizontal surface of slide A and fall off from the posterior surface of slide B in a smooth even sheet, uncrushed—in fact, untouched. Dry at once by shaking vigorously in the air. Thus one smear is made on slide A. Slide B may be smeared in exactly the same manner, using the end of slide A for contact. Stain as soon as convenient. Take care that flies do not walk over the surface of the dried smear or the corpuscles will disappear like magic.

It requires much less time to make the smears than the written description of the method would imply, and after a little practice one can make smears with great dexterity and accuracy. Do not use too large a drop of blood. One that does not spread quite to the edges of the slide is best, for then the leucocytes will not collect along the edges of the smear. In making the second smear and all subsequent ones, use a perfectly fresh drop of blood, not the drop that has exuded by itself during the preparation of the previous smear. Smears of other body fluids are made similarly.

DIRECTIONS FOR STAINING IN BRIEF

Use the Harlow[1] (Skelton[2]) stain. The two staining solutions are kept separate, each in a three-ounce, wide-mouthed bottle. 1. Drop the smear, air-dried, but without other fixation, into the eosin stain twenty seconds. 2. Remove, drain an instant against the mouth of the bottle, drop directly into the methylene blue stain twenty seconds. 3. Remove, drain as above, wash rapidly to and fro in a tumbler of tap-water, then shake off the excess of water and blot dry between two folds of filter-paper.

This technic applies to the Harlow stain the principles commonly used in the laboratory for staining sections and smears with ordinary stains, the chief distinctions being the absence of previous fixation or hardening; staining under cover (i. e., the bottles are kept stoppered while staining); there is no washing between stains; and some of the first stain is carried by the smear directly over into the stock solution of the second.

The specimen is ready for examination. The total time spent in staining is less than one minute. Everything is stained—red cells, white cells, the three types of granules, blood-plates, malarial organisms, bacteria, etc., equal to the lithographed plates in text-books. Pleural effusions, ascitic fluids, spinal fluids, pus-smears and similar smears are advantageously stained by this method, since stray red corpuscles which may get into the smear are at once identified by their red stain, whereas lymphocytes, leucocytes, pus cells, mucus, bacteria, etc., show blue.

ADVANTAGES OF METHOD

In a former article[2] I laid stress on the usefulness of blood-smears in general diagnosis and on a special method for using the Harlow stain for cover-glass smears, as well as the many advantages of the stain, and method of staining, as compared with Wright's and others. I prefer the old Ehrlich cover-glass smears for reasons there stated, but the ease with which slide smears are made and stained by the above method deserves special recommendation to busy practitioners.

The method of staining as given above is exceptionally convenient. It will be observed that there is no handling or pouring of the stains at all, no pipettes used, no dilutions on the slide, no special apparatus, preparation, or mixing of stains beforehand, no previous fixation of smears, no soiling of the fingers, table, or aught else, while ordinary tap-water suffices to wash off the excess stain. There is no fear of overstaining should the smear be left in either of the staining solutions; but usually twenty seconds is the minimum time required. With the bottles mentioned, each about half full of stain, the upper end of the glass slide projects well up toward the mouth of the bottle, where it is easily grasped by the thumb and finger. Forceps are unnecessary. The bottles must be kept stoppered at all times, even while staining, and opened only when introducing or transferring the smear. This is to protect the alcohol from evaporation, and to prevent the absorption of atmospheric moisture, and the precipitation of the stains on the surface of the smear. Glass-stoppered bottles are preferable, but corks dipped in melted paraffin will suffice. While staining, the upper end of the slide should be kept clean and dry throughout, so that the fingers need never be soiled.

The 50 c.c. or so of stain in each bottle will keep indefinitely, will stain hundreds of smears, and the liquid is practically never used up, since none is ever thrown away. When the stain gets a little low in the bottles a little more alcohol should be added. When not in use the bottles should be kept carefully stoppered and away from the direct light. An ordinary crayon-box or square cigar-box will answer very well, offering enough room for bottles, filter-paper, slides, etc.

METHOD OF PREPARING STAINING SOLUTIONS

For the sake of completeness the exact method of preparing the staining solutions is here given:

Place one-half gram of eosin (Grübler's water-soluble) in 50 c.c. of absolute methyl (wood) alcohol (Merck's highest purity) in one of the bottles. Similarly place one-half gram of methylene blue (Ehrlich's medicinal) in 50 c.c. of the same alcohol in the second bottle. Do not filter either stain. After dissolving a few hours, the stain is ready for use. Be careful that no water ever gets into either stain. Accurate weights and measurements are not necessary in making up the stains. Both are supersaturated and, in addition, contain insoluble, or slowly soluble, residues.

STAINING TECHNIC AND STAIN CORRECTIONS

On a moment's reflection it is clear that any failure to obtain results in staining a properly made smear must come under one of the four following heads:

1. *Technic of Staining.*—As this consists simply in standing the two stain solutions and a tumbler of water in a row and dropping the smear into each in turn, a mistake here seems improbable. But you must follow directions specifically. Do not try to wash off the excess of methylene blue under the tap—the driving force of the water will take out almost every trace of the blue. There is no occasion to hurry through any of the steps in staining until you come to the washing. This must be done rapidly, but thoroughly enough to rinse off all floating blue stain from the slide. Remember that the blue comes out rapidly and in direct proportion to the time spent in washing. The red stain is removed much more slowly. Three or four quick swashes back and forth should wash it thoroughly. Then with one fling shake the excess water on the floor, touch the lower end of the slide to filter-paper to catch the last drop of water, and finish by blotting dry between two folds of filter-paper, holding the slide and filter-paper carefully in place with left hand while rubbing heavily with the right. The slide should have a pink-red appearance to the naked eye, if the smear is of blood. Use the stains always in the sequence given: red, first; blue, second. Carrying a little of the eosin on the slide into the methylene blue seems to be the main factor in preventing the deterioration of the stain by age.[3] When, by mistake, a little of the methylene blue is carried into the eosin a permanent cloudy precipitate forms in the latter, but apparently not to any real detriment.

2. *Eosin.*—Any sample which will stain red cells when dissolved in alcohol and used alone is all right.

3. *Methylene Blue.*—Any sample which will stain white cell nuclei when dissolved in the alcohol and used alone is all right. It is to be noted that when certain samples of methylene blue are used in the regular stain-

1. Harlow: A Differential Staining of Blood with Simple Solutions, Am. Jour. Med. Sc., April, 1904, pp. 662-667.
2. Hayhurst, E. R.: A Satisfactory Method for Staining Blood-smears, THE JOURNAL A. M. A., April 3, 1909, liii 1100.

3. Theoretically the eosin solution becomes more acid by age, owing to slow oxidation in the alcohol. The same applies to the alcohol in the methylene blue solution, but the latter appears to contain enough of slowly soluble alkali to more than correct itself and to be just about balanced by the frequent transference of a slight amount of eosin. Hence the frequency of use of the stain bears some relation to its longevity. When used every few days it appears to keep permanently corrected. When used several times daily the acid eosin finally overcomes the alkaline methylene blue, the nuclei gradually fail to take the blue so well, and correction becomes necessary. A given sample, so used, lasted six months, however, before correction with a drop of alkali became necessary.

ing method a too decidedly alkaline (deep blue) stain results, so that the red cells have a purple or blue tinge instead of the normal pink. Old stains, which have been little used, may take on this tendency. This is doubtless due to a slowly soluble alkaline impurity in the dye or dissolved out of the glass in the bottles. It is easily corrected (see below). With more use the transferred eosin, being acid, will eventually correct it, too.

4. *Methyl Alcohol.*—This is the factor most often at fault. I have always used alcohol recently imported for institutional use and, therefore, fresh. If fresh it is neutral in reaction. Old alcohol may become acid because of the presence of moisture, which, with room temperature and exposure to light, permits slow oxidation of the methyl alcohol to formic aldehyd and finally formic acid. Alcohol obtained through jobbers and supply houses in this country may show this metamorphosis. Peebles and Harlow,[4] however, after calling attention specifically to this defect, have shown how to correct it. In brief, should the stained smear "fail to show any blue," add a drop of strong alkali (20 per cent. potassium hydroxid) to the bottle of methylene blue solution; should it be stained "too blue," with the red cells purple, add a drop of glacial acetic acid to the methylene blue. I find this works admirably. The eosin solution never requires correction—just the methylene blue. Thus the intensity of either stain in a smear, being strictly a question of chemical reaction in the methylene blue solution, is absolutely under control.

As is well known, different bloods vary in the degree of alkalinity they possess. With a given stain properly corrected the normal blood shows only a pale blue nuclear stain, whereas a stain from a case of pneumonia takes an intense dark blue nuclear stain. The red cells are stained red, the depth of red and its distribution depending on the amount and distribution of the hemoglobin. Should the latter show a purple tinge, the blue stain is too alkaline and should be corrected. The granules in the leucocytes are invariably stained (neutrophilic, eosinophilic, basophilic) regardless of slight differences in the chemical reaction of the stain. In order to have perfect stains of all blood conditions it may be well to have two methylene blue solutions, the one made purposely more alkaline than the other. Try a smear in each. My observation is that any sample which will stain a normal blood so as to show pink-red erythrocytes, and pale blue nuclei in the polymorphonuclears, suffices for all elements in all blood smears, as in most of the pathologic conditions the blue intensification is greater, and the contrasts more marked.

SUMMARY

1. Satisfactory blood-smears may be made by following specific directions.

2. The Harlow stain for blood-smears is utilized in a one-minute method so that it "stains everything" with perfect satisfaction.

3. The method is simple, convenient, and dependable.

4. The physician prepares his own stains to start with.

5. The stain solutions are always ready and keep indefinitely.

6. The stain and method of staining are recommended for dried smears of all kinds.

7. Peebles and Harlow's observations on corrections of faulty eosin-methylene blue stains render control practically absolute.

4. Peebles, A. R., and Harlow, W. R.: Clinical Observations on Blood-Stains, THE JOURNAL A. M. A., March 6, 1909, lii, 768-769.

Clinical Notes

INTRAMEDULLARY TUBERCULOMA REMOVED AT THE LEVEL OF THE FIFTH THORACIC SEGMENT OF THE SPINAL CORD

NOTE ON BEHAVIOR OF THE CEREBROSPINAL FLUID *

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WITH SURGICAL REPORT

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Patient.—A. G., aged 36, American, a wood-working machine hand, entered Buffalo General Hospital, Dec. 26, 1907, complaining of general weakness and pain in the left side of chest.

History.—His father died of old age at 82; mother is living and well at 65. He has five brothers and three sisters living and well. One brother died of typhoid fever at 44. There was no family history of tuberculosis, cancer or rheumatism. Patient had three children living and well; wife had had no miscarriages. Patient had had measles, mumps and whooping cough in childhood and had typhoid fever in 1892; was sick in bed about four weeks. Had influenza in spring of 1907 and a slight attack of pleurisy in summer of 1907. Since that time had been unable to do anything, because of general weakness and pain in various parts of body. Had been hard of hearing in right ear since having had influenza, health being good up to that time. Six or seven years ago patient had an operation for what was probably an hydrocele of left testicle. Last spring the right one began to be similarly affected. About one month before he was seen the left one again seemed to be enlarging. He denied all venereal history. His normal weight was from 135 to 140 pounds. One month before he was seen he weighed 117 pounds. Most of his weight had been lost since early in the summer of 1907. Smoked and chewed tobacco and drank moderately.

Present Illness.—Since about Dec. 1, 1907, patient had been growing markedly weaker. He had pain in left chest, especially when lying down and on deep inspiration. During past summer patient had frequent night sweats, and since Dec. 1, 1907, he had had profuse night sweats every night. Had no special cough. Bowels were constipated; during the two weeks before he was seen nothing but an enema proved successful.

Examination.—This showed a fairly well developed but poorly nourished man. Pupils reacted normally. Tongue coated with grayish fur. Chest showed poor expansion throughout; less on right in supra- and infraclavicular regions. The heart was normal in size and position. Patellar reflexes were exaggerated, ankle clonus and Babinski sign present.

December 27, 1907: On right side in suprascapular region, the breathing was bronchial in quality; in the infrascapular, it was exaggerated. Epididymis on each side was very hard and large. Glands in groin were somewhat enlarged, also along Scarpa's triangle. Suggestion of ankle clonus; knee-jerk quick. Some crepitus in left knee-joint on flexion; less in right knee.

December 29, 1907: Blood examination showed: hemoglobin, 85 per cent.; red corpuscles, 5,080,000; white corpuscles, 7,200; differential polymorphonuclears, 75 per cent.; large lymphocytes, 5.5 per cent.; small lymphocytes, 14.5 per cent.; eosinophiles, 3 per cent.; basophilics, 2 per cent.

January 3, 1908: Fluoroscopic examination showed two distinct areas of shadow in the left chest. Right chest was clear. Left chest was slightly darker over upper lobe than on the right side same point. Patient returned to his home unimproved after a period of two weeks. The bowel movements became involuntary. A few days later he lost control of the bladder, and the urine passed involuntarily. The legs became suddenly weaker, and the pain in the lower part of the body and right leg increased in severity. He was seen by Dr. E. R.

* Read at the meeting of the Eighth District Branch of the Medical Society of the State of New York, held at Batavia, N. Y.

† Dr. Krauss died September 21, after this paper was accepted for publication.

McGuire early in March, who suspected spinal cord tumor, and induced him to re-enter the Hospital March 4, 1908.

March 5, 1908: At Dr. McGuire's request I examined the patient and found him pale, weak, emaciated, lying on his right side, complaining of a great deal of pain over the chest, especially the left side, which had defied all manner of treatment for many months. Movement of the body did not seem to aggravate the severity of the pain, and patient was as comfortable on his left side or back as on his right side. Inspection showed the legs drawn up, flexed at the thighs and knee joints, and atrophied to a very marked degree; there was no difference in measurements between the right and left leg—both were practically reduced to skin and bones. The muscles of the arms, however, were quite well preserved, and not wasted to the extreme which characterized the lower extremities. Some slight degree of stiffness bordering on contracture was present in the legs. The abdomen was flattened; urine and feces were passing involuntarily. No bed sores were present. Testing the muscular strength of the legs gave an absolute negative result. No motion of any kind could be detected from the chest caudad whatever. The patellar tendon reflexes were slightly exaggerated; ankle clonus was slightly exaggerated; patellar clonus was absent; Babinski's reflex and plantar reflexes were slightly present on both sides; the cremasteric and abdominal reflexes were absent. Testing the skin for sensation revealed an anesthesia complete for all forms caudad of the intermammillary line. The ventral level was quite sharply defined, but the dorsal level was marked by a zone of 1½ inches in width, in which the differentiation was less marked. In this zone of uncertainty the patient would be unable to distinguish between sharp and dull objects; would give contradictory answers, and on successive examinations would interchange the anesthetic, hypesthetic and normal areas. Examination of the spinal column elicited by deep pressure a sensitive area over the third to fourth thoracic spinous processes. No deflection or deformity of the spinal column could be detected. On his first stay in the hospital, the temperature on three occasions rose above normal; the pulse ranged from 80 to 90, while the respirations continued 20. Urinary examinations showed absence of albumin and sugar, normal specific gravity, and an occasional leucocyte and granular cast. On the second stay at the hospital, the temperature rose above 100 F. on two occasions, and the pulse ranged from 90 to 100.

Reviewing the clinical history of this case, we have a man without any tuberculous or specific history, attacked by influenza in the spring of 1907, and followed by a weakening of the whole body, pains in the chest, and a slight attack of pleurisy in the summer of 1907; the testicles became involved, he began to lose in weight, and in December, 1907, the process seemed to advance with increasing vigor. With continuous pain, weakness of the legs advanced to such a degree that he was obliged to enter a hospital. A very careful examination of the chest by an experienced clinician revealed a tuberculous process in the left lung, which was verified by the radiograph. All attention was paid to the thoracic contents, and as the pain and weakness and loss of weight could be attributed to the chest lesion, no attention was paid to such symptoms as "marked constipation, patellar reflexes exaggerated, ankle clonus and Babinski present."

Returning home, the symptoms of cord disease advanced much more rapidly than the chest symptoms; bladder disturbances, rapid loss in strength, increasing weakness of the legs even to complete paralysis, exaggerated deep reflexes and absence of the superficial reflexes, all pointed to a slowly increasing intraspinal pressure; the zone or level of anesthesia at the height of the intermammillary line, and the area of sensitiveness over the third and fourth spinous processes spoke for a lesion at the level of fifth thoracic segment. Although the patient was not in a very favorable condition for an operation, his relatives were very favorably inclined, and the patient most desirous for any kind of relief. A laminectomy was agreed on at the earliest moment.

SURGICAL REPORT BY DR. E. R. M'GUIRE

The patient was told of his desperate condition, and little if any hope was given him of recovery. He requested to have something done, however, even with so slight a prospect of success. March 10, 1908, an incision was made from the first to the seventh dorsal vertebra. The muscular attachments were easily separated with comparatively slight oozing. The second, third, fourth and fifth spinous processes were removed with a rongeur forceps, and the canal opened at the fifth spinous process with hammer and chisel. Then with a Doyen forceps the canal was opened from the fifth to the second thoracic spinous process. The dura appeared normal and even palpitation of the cord revealed no evidence of tumor. On opening the dura, the pia appeared dull and of a different consistency at the second dorsal spine. Closer inspection showed a distinct tumor formation involving the greater part of the interior of the cord. With the blunt end of a dressing forceps, the tumor was shelled out with perfect ease. There was very little hemorrhage at any time. After removal of the tumor there was a small section of the cord still intact. The pia and dura were sutured with plain catgut, and the external wound closed with thread, without drainage. The patient left the table in very poor condition. Continuous salt solution per rectum was immediately started, also a subcutaneous injection of 300 c.c. of salt solution containing 0.6 per cent. of adrenalin chlorid. The patient failed to rally, and died one hour later. Permission to reopen the wound was obtained, and the cord was removed and sent to Dr. Burton T. Simpson for examination.

Pathologic Report by Dr. Simpson: The tumor, as received at the laboratory, was 2 cm. by 1.5 cm. (¾ in. by ⅝ in.) in size, of very firm consistency. Cut section showed a glistening white homogeneous surface. Microscopically, the periphery showed numerous giant cells, while the central part was composed of a dense fibrous tissue. Section stained with carbolfuchsin showed a few tubercle bacilli. A section of the cord, at the area where the tumor laid, showed the cord structure completely destroyed, while a section taken about 5 cm. (2 in.) below showed complete degeneration of both ascending and descending tracts. Microscopic diagnosis of the tumor is given as tuberculoma.

This case is unusual in that an intramedullary tuberculoma could exist without producing dissociation of sensation. Repeated examinations were made to test sensation, but patient's answers were always the same.

A phenomenon which I observed during the course of the operation may be of some service in locating the situation of the tumor after the dura has been exposed, provided the tumor is intradural, or intramedullary. The increased bulk of the cord produced by an intradural or intramedullary tumor will completely occlude the lumen of the dura and interrupt the passage or flow of the cerebrospinal fluid. There will result a damming back of the cerebrospinal fluid cephalad of the constriction and an increased tension will follow. Caudad of the constriction (tumor) the cerebrospinal fluid will be diminished in tension, owing to the cutting off of the normal tension and circulation. Incising the dura cephalad of the tumor will cause a spurting of the cerebrospinal fluid, a jet being projected from several inches to a foot or more in height, according to the tension or force of the fluid; while caudad of the tumor, an incision into the dura will cause only a welling out of the fluid from the aperture, flooding the field of the operation without any force or tension. Observing the behavior of the fluid, the surgeon will know whether he is cephalad or caudad of the tumor, and can make his incision accordingly.

This phenomenon has been observed several times at the Buffalo General Hospital, and it is believed that it has some significance and value in detecting the situation of intradural tumors after exposure of the dura.

479 Delaware avenue.

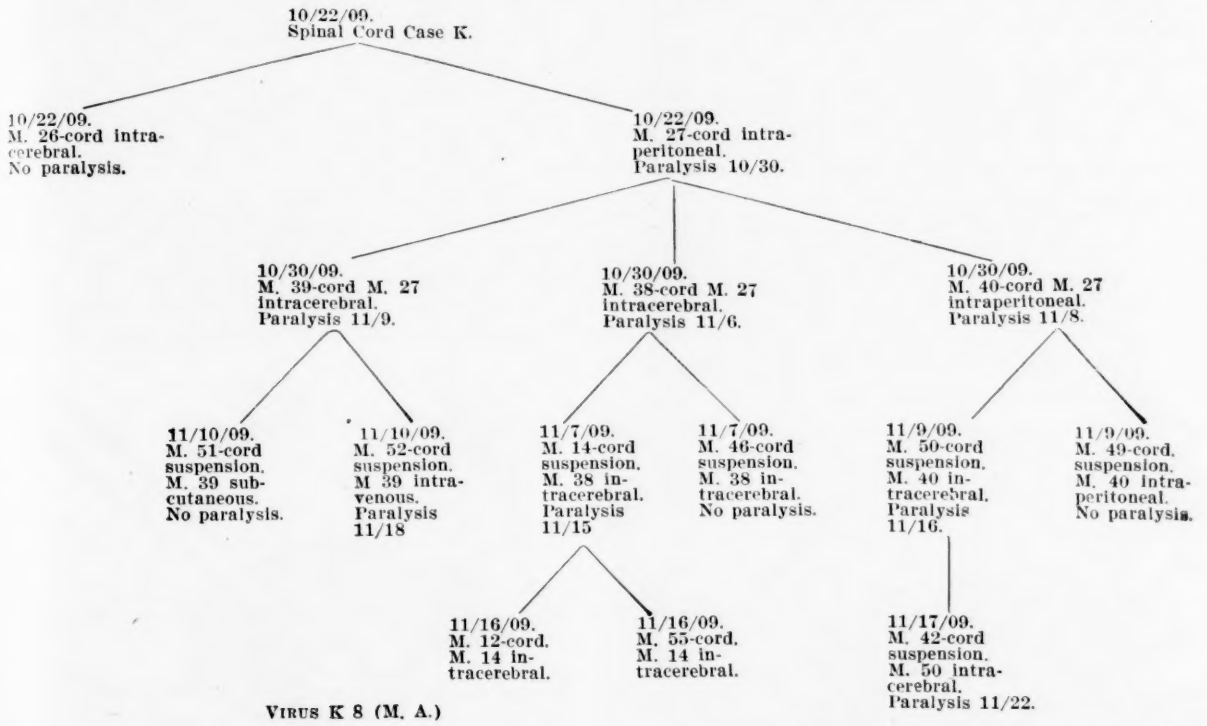
THE TRANSMISSION OF EPIDEMIC POLIOMYELITIS TO MONKEYS

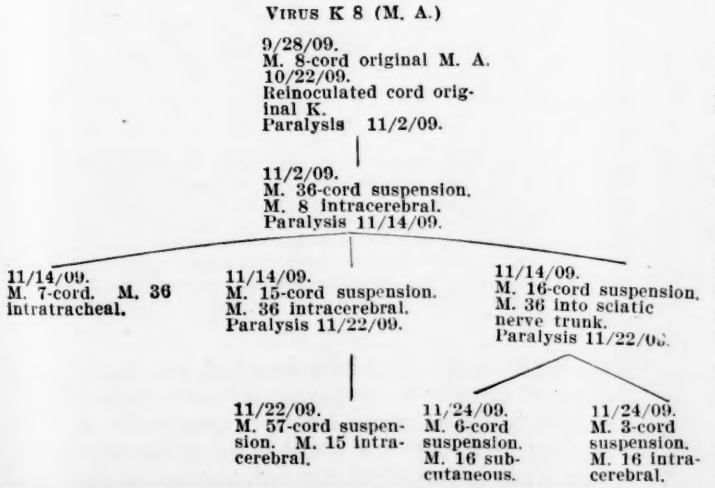
A FURTHER NOTE *

SIMON FLEXNER, M.D., AND PAUL A. LEWIS, M.D.
NEW YORK

In a previous communication[1] we presented in the form of a chart the results secured up to that time in producing poliomyelitis in monkeys by injecting intracerebrally a virus, denominated M.A., obtained from the spinal cord of a child suffering from epidemic infantile paralysis. The virus had been passed successively through three generations of monkeys and is still being transmitted.

We desire in this communication to present the results in the form of a chart[2] obtained up to this time with the second virus, denominated K. It is, in our opinion, desirable that the facts thus far secured relating to this virus be published, since they extend considerably the previous observations.





In the first place, it can now be affirmed that the virus of poliomyelitis cannot be very difficult of transmission to monkeys under the conditions leading to the development of the lesions and symptoms characteristic of epidemic poliomyelitis in man, since both specimens of human cord furnishing the original virus have sufficed for the transmission of the disease successively.

In the next place, it can now be stated that it is not absolutely essential that the virus be introduced into the brain, but that successive transmission is possible by way of the peritoneal cavity (Monkeys 27 and 40), by intravascular injection (Monkey 52), and by intraneural injection (Monkey 16). The lesions in the monkey in which the virus was introduced into the sheath of the sciatic nerve developed first on the side inoculated and later extended to the opposite side of the spinal cord.

On the other hand, it cannot yet be affirmed that still other avenues do not exist for the entrance of the virus into the central nervous system. Additional observations are required and are, indeed, in process of being made, before the statement can be ventured that infection does not occur by way of the skin, the respiratory passages and the digestive tract.

The conclusions to be drawn from the experiments related are to the effect that the virus of epidemic poliomyelitis is readily transmissible from man to monkeys and from monkey to monkey, by way of the brain, the peritoneal cavity and the circulation, and that, however transmitted successfully, it becomes established in the spinal cord and medulla, where it sets up characteristic lesions which are followed by equally characteristic effects that exhibit themselves as the usual symptoms of infantile paralysis in human beings.

Moreover, it can now be stated that this experimental form of poliomyelitis in monkeys is a severe and very often a fatal disease, and when recovery from the disease takes place there persist residues of paralysis which resemble the paralytic effects also persisting in human subjects of poliomyelitis.

* From the Laboratories of the Rockefeller Institute for Medical Research.

1. THE JOURNAL A. M. A., Nov. 13, 1909, liii, 1639.
2. In the chart M. signifies monkey.

THE SUBMUCOUS RESECTION OF THE NASAL SEPTUM

A RASPATORY FOR THE AVOIDANCE OF PERFORATIONS

OTTO T. FREER, M.D.
CHICAGO

Perforations in the course of submucous resections of deflections of the nasal septum are, in my experience, oftenest made during the denudation or excision of the bony part of the deflection after the removal of its cartilaginous portion. Nearly all of these perforations occur in baring the so-called ridge of its periosteal coverings, the term "ridge" being used to describe the bony wall which, arising from the nasal floor, forms the base of the septal skeleton and is composed of the incisor crest, anterior end of the vomer and superior maxillary crest. The ridge may be so low that it is barely indicated, or it may form a bony partition whose height may even reach five-eighths of an inch. When the septum is deflected into one or the other nostril, the ridge bends over into the naris of the convexity of the deviation in a varying degree, so that in extreme cases it may lie almost flat on the nasal floor. The periosteum covering the ridge is commonly firm, thick and vascular and envelops its upper border, crossing over it into the other nostril. The periosteal envelope of the ridge is, therefore, distinct from the perichondrial envelope of the cartilage of the septum, but perichondrium blends with periosteum along the top of the ridge, which thus marks the place where both perichondrium and periosteum of one side are continuous with these membranes on the other side of the septum. For this reason, after the removal of the cartilaginous deflection, the upper boundary of the ridge is not seen as bare bone, but is usually invisible under its covering of periosteum and has to be found by feeling with a probe. Observation has shown me that the difficulty so created in finding the ridge and resecting it, thus buried in adherent fibrous coverings, has made many operators afraid to touch it, so that they content themselves with merely removing the cartilaginous part of the deflection. Such neglect to take away the ridge is, in my experience, nearly always the cause of an imperfect clearing of the obstructed nostril. In several instances, when the space gained by a cartilaginous resection seemed sufficient, I have had to remove the ridge in a later operation, and I have known other surgeons to have the same experience. Even when it merely takes up space because of excessive thickness and is hardly bent over, the ridge should always be removed, as the breathing-space thus obtained is of the greatest advantage to the patient.

The perforations referred to are made along the upper limit of the ridge, the operator, after successfully removing the cartilaginous deflection, tearing or cutting his way into the other nostril in attempting to free the bone from its periosteum along the upper border of the ridge and on the side of it which lies in the naris of the concavity of the deflection, the perforation occurring so easily that the surgeon does not know that he has made it until he looks through it into the other nostril. As the upper boundary of the ridge represents the bottom of the groove of the concavity, the perforation is seen in this bottom, when looking into the nostril containing the hollow of the deflection. The mucous membrane seems to tear with especial readiness in this region, so that what seems a mere slit at first usually becomes a large hole when the ridge is resected. While I succeeded in avoiding perforations in all but the rarest cases in this region in my earlier work, I never felt entirely sure that one would not be made until I began to bare the ridge with the little raspatory here described, which gives me a feeling of security in preparing the bony deflection for resection that I never had before I began to use it. This raspatory (Fig. 1) is a small chisel-edged instrument whose blade is curved on the flat, and has a front and lateral cutting edges.

Fig. 1.—Raspatory for the denudation of bony deflections of the nasal septum.

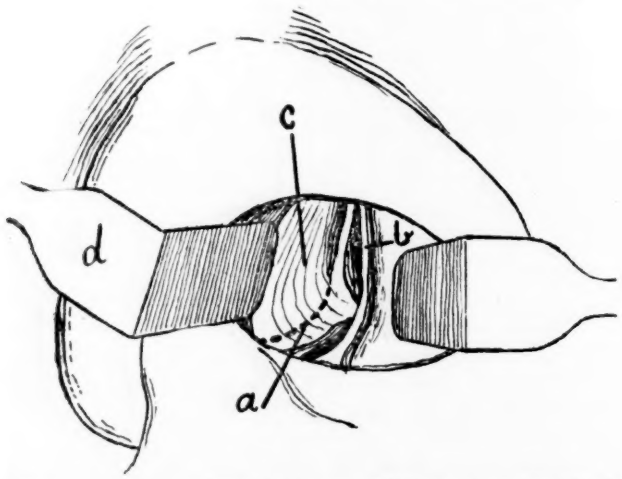


Fig. 2.—The left nostril, held open with retractors; the dotted line, a, shows the incision which splits the periosteum along the upper border of the "ridge;" b, cut edge of the uplifted mucous covering of the posterior part of the deflection; c, the mucous membrane of the opposite nostril (naris of the concavity of the deflection) uncovered by the removal of the cartilage; the retractor (d) holds the anterior (reversed L) flap forward.

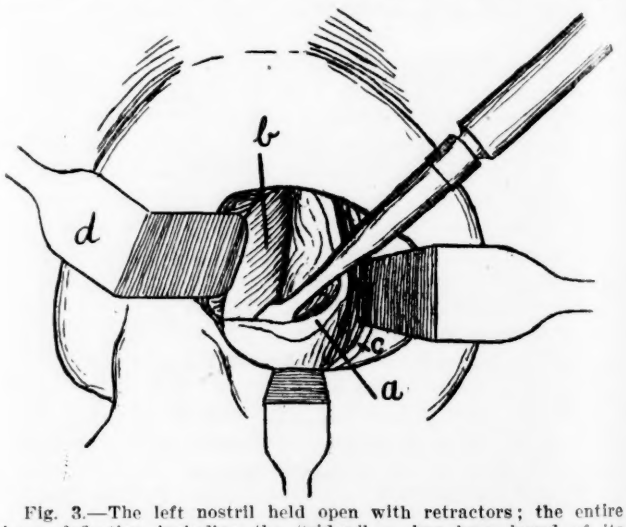


Fig. 3.—The left nostril held open with retractors; the entire bony deflection including the "ridge," a, has been bared of its coverings by the raspatory, which may be seen working toward the nasal floor on the concave side of the deflection; b, mucous membrane of the opposite nostril uncovered by the removal of the cartilage and uplifted from the bony deflection; c, cut edge of the uplifted covering of the posterior part of the deflection held away with a long retractor; d, retractor holding forward the anterior (reversed L) flap.

It is used in the following manner: After finding the upper boundary of the ridge with a dull elevator, the

periosteum is split along this boundary from behind forward (Fig. 2) with a small round-edged knife of my set[1] designated by the capital letter E. The raspatory (Fig. 3) is then grasped firmly, close to its cutting end, so that it may not slip, and the periosteum is scraped away from the bone with it on the side of the convexity of the deflection. Then the denudation of the side of the ridge in the naris of the concavity is begun. Often the upper border of the ridge is found surmounted by a strip of cartilage contained in the periosteum envelope of the ridge, not the envelope of the cartilage of the septum, and this cartilage has to be scraped away with the raspatory from the ridge before the upper boundary of the bone can be found. Then the raspatory is made to work its way cautiously over the top of this boundary and down the other side of the ridge into the naris of the concavity until the bone is bared to the nasal floor (Fig. 3). In performing this denudation the instrument is held so that its long diameter is nearly across the direction of the ridge. After the incisor crest and anterior portion of the ridge are thoroughly denuded to the nasal floor, the raspatory is directed backward into the concavity of the bony deviation formed by the meeting of the deflected perpendicular plate of the ethmoid bone above and the vomer below, the angle made in bony deflections by the junction of these two bones forming a horizontally placed bony V, described by me in previous articles. The advantage of the raspatory over the ordinary sharp and blunt elevator in denuding the bone lies in the constant contact of the cutting edge with the bony surface, so that plunging or unexpected cutting through the coverings by the instrument is avoided, while in distinction to this, the elevator is inclined to leave the bony surface at some point, especially in hollowed places, and so is liable to cut through the mucous membrane.

34 Washington Street.

THE PRESENCE OF TUBERCLE BACILLI IN THE CIRCULATING BLOOD*

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AND
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It has been known since the early days of bacteriology that tubercle bacilli are occasionally found in the circulating blood of patients suffering with tuberculosis. It is probable that every case of advancing tuberculosis is, at some stage of the disease, a bacteriemia; at least, there are times during the progress of every case in which tubercle bacilli can be found in the blood. This has been demonstrated by experiments and is also shown by those cases of miliary tuberculosis in which every organ of the body becomes simultaneously the seat of numerous tubercles.

The question was studied experimentally many years ago by Nocard, Bang, and others in an attempt to discover whether or not the flesh of animals suffering with tuberculosis was dangerous as food. The experiments carried out at that time showed that tubercle bacilli, although introduced directly into the circulation in large numbers, are in a very short time filtered out from the blood. It is universally believed that this action takes place in the lung, of which there is much experimental proof, because the muscular tissue is found free from bacteria, which could not be the case if it took place in these tissues, or if the blood still contained the germs. Much interest was caused, therefore, when in the fall of last year Dr. Rosenberger announced that tuberculosis was always a bacteriemia before it became localized in the various organs of the body, and that bacilli could be demonstrated in the blood by a very simple procedure. His method consisted in drawing from 5 to 10 c.c. of blood into a citrate solution in an ordinary test-tube, which was then placed in an ice-box for twenty-four hours, and the sediment examined without centrifugation. The ordinary stains were used, although Dr. Rosenberger recommended Pappenheim's stain as a decolorizer. In his first paper he speaks of the large number of tubercle bacilli which are sometimes found in a single field. This at once excited skepticism in the minds of many, as it seemed improbable that such masses of bacteria could pass through the capillaries. The alleged discovery was of such vast importance that it merited careful investigation.

Through the kindness of Dr. J. W. Coon, superintendent of the Wisconsin State Tuberculosis Sanatorium at Wales, we were allowed to obtain specimens of blood from a number of the patients known to be suffering with tuberculosis. At our first visit we drew specimens from eighteen patients, following Rosenberger's methods throughout exactly. After allowing the specimens to stand in the ice-chest for twenty-four hours we made smears from the sediment and stained and examined them. We then took the remainder of the blood and put it in a powerful centrifugal machine, and again made smears from the sediment. In all eighteen cases our results were absolutely negative by both methods. It will be observed that our second method, namely, examining smears after centrifugating 10 c.c. of blood, gave us a very much better chance of discovering any tubercle bacilli which may have been in the blood than the former method. We had intended pursuing the experiments on a larger number of patients, but private advices from several laboratories giving results identical with our own convinced us that it was useless. Further investigation may force us to change our opinion, but at the present time we feel justified in saying that the method of Rosenberger is not a reliable one and does not furnish a means for the diagnosis of tuberculosis either in the early stages or later.

NOTE.—Since the above paper was read the question of tubercle bacilli in the blood seems to have been entirely cleared up. Brem has shown that the acid-fast bacilli, mistaken by Rosenberger for tubercle bacilli, are frequently contained in distilled water as found in laboratories. After spreading the blood on the slide, Rosenberger lakes it by flooding with distilled water, which must stay in contact with it for some time, after which it is dried and stained. During the process of laking the acid-fast bacilli become fixed in the smear and take the subsequent stain. The observation of Brem has been confirmed by numerous workers, and at the present time we can say with a great degree of confidence that tubercle bacilli cannot, as a rule, be found in the circulating blood. Even when introduced directly into the circulation of animals, they disappear from the flowing blood within a few minutes, as has been demonstrated by Schroeder and Cotton, MacFarland, Anderson and others. We therefore feel confident in reiterating the opinion expressed by us in our presentation before the Wisconsin State Medical Society last June.

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* Read before Wisconsin State Medical Society, June 23, 1909.

1. Shown in THE JOURNAL A. M. A., Sept. 30, 1905, p. 988.

CASE OF DERMATITIS HERPETIFORMIS FOLLOWING PAPAW POISONING

B. G. R. WILLIAMS, M.D.
PARIS, ILL.

The following report is interesting mainly because of the apparent etiology of the disease:

History.—Mrs. K., American, aged 45, housewife, health previously good, stated that on the evening of September 18 she handled and smelled some papaws. In the morning an eruption appeared on her body, which she supposed was due to these as she had been affected previously in the same way. She used the ordinary sugar-of-lead lotion, but as there was no improvement in a week (September 26) she called on me.

First Examination.—In general this verified the patient's supposition as to the cause and showed the following condition of the skin: On all portions of the body except the hands, forearms, face, back, legs and feet were many small round vesicles filled with fluid. These were of various sizes, but always small and were round and surrounded by a marked hyperemia. Except for an almost intolerable itching and burning, there were no symptoms. I diagnosed the case as papaw poisoning and advised simple lotions, predicting most probably a speedy recovery.

The progress of the case, however, was not favorable, and on the evening of September 29 the patient informed me that she thought more eruption was appearing, especially on the back. She stated that the character of the eruption did not seem to have altered.

Second Examination.—When I saw her two days later (October 1) I was at once willing to change my diagnosis. Here and there over the skin were drying vesicles showing almost a scar-like character. I was struck at once by the appearance among many of them of a brown pigmentation, the intensity of which, though variable, was often very marked. Here and there were clumps of vesicles with injected bases. These I examined with a double convex hand lens. There were no ulcers nor were there any tendencies to spontaneous rupture. Vesicles, though still varying in size, were somewhat larger than previously. In general they were irregular in shape, often quadrilateral. Intermingled with the vesicles, hyperemia and pigmentation were scales showing the remains of dried vesicles. Blood examination showed no eosinophilia. I diagnosed a vesicular form of dermatitis herpetiformis. I prescribed mercury succinimid in small doses internally as an alterative and gave the patient resorcin-sulphur ointment for external application.

On October 3 practically the same condition was present. The distribution was as follows: neck, arms, flexor side of forearms, chest, back of trunk and on the thighs.

On October 20 the condition was the same except that the eruption was not so extensive. New groups of vesicles identical with the preceding ones appeared from time to time. Where clothing rubbed the body the lesions assumed an eczematous character. Pigmentation marked dying vesicles and slight scars showed the location of the oldest ones.

More Care for Swine than for Men.—The mere question of preservatives and adulterants is only a part of the great question of pure food to which the public must be educated, writes Professor Irving Fisher in a popular article in the New York *Christian Advocate*. We must not forget, for instance, the lack of proper meat inspection for the citizens of this country. The present federal meat inspection is almost wholly for the benefit of foreigners. Efficient state and municipal inspection is needed. Similarly we need a far better protection against an impure milk supply. In at least one of our states, the swine are better protected than the people. In that state the law requires that the skim milk from dairies shall be sterilized before it is fed to hogs, but there is no law requiring the sterilization of the remainder of the same milk which is to be made into butter and cream for human consumption.

Therapeutics

RENAL COLIC

Attacks of renal colic come on so suddenly and so unexpectedly, the pain which accompanies them is so agonizing, and the liability to subsequent attacks is so great, that suggestions concerning their prevention are certain to command attention, and the *New York Medical Journal*, Sept. 25 and Oct. 2, 1909, offers several articles on this phase of the subject.

It is not necessary to describe the well-known treatment for the paroxysm, but the following suggestions for the future management of the patient may be of value:

1. If the calculus becomes impacted in the ureter so that it cannot be dislodged, operation is necessary. If the calculus remains in the pelvis of the kidney, operation is advisable. If the calculus has caused purulent inflammation of the pelvis of the kidney, or abscess of the kidney, or if it has caused retention of urine, operation is immediately necessary.

It cannot reasonably be expected that remedies administered internally will cause the disintegration of a stone which is of sufficient size to set up an inflammation of the pelvis of the kidney, or is of sufficient size to permanently obstruct the ureter.

2. If the calculus is in the pelvis of the kidney, as shown by a radiograph, and is not causing any serious symptoms, and an operation is deemed inadvisable, the danger of its entering the ureter and causing an attack of renal colic will be diminished if the patient avoids muscular strain and unnecessary jolting.

3. If there is no reason to suspect that a calculus remains in the upper urinary passages, and if a calculus has certainly been passed, so that there is reason to believe that there exists in the patient a tendency to the formation of substances which will favor the development of renal calculi, a careful regimen should be laid down for his guidance.

Among the factors which are conducive to the formation of these calculi are intestinal fermentation and putrefaction, which give rise to autotoxemia, disordered metabolism, deficient oxidation and insufficient elimination by the intestines, kidneys, skin, and lungs.

The primary object of treatment, then, is to prevent the conditions from arising which either permit the formation of a calculus or will allow an increase in the size of one already present. As above stated, though a calculus may disintegrate, it should not be expected, and it is little less than reprehensible to promise, that any drug, or any water, will partially or completely dissolve it. However, both patient and physician hope to effect a solution, partial or complete, of calculi already formed, or, at least, that the sharp edges of the newly formed calculus may be rounded so that it will not cause so much pain. If a urate or phosphate concretion has not long been formed it may dissolve, but probably no other calculus can do so under the conditions surrounding it. The sharp edges of all calculi may become rounded, if long in the kidney, from mucous deposits alone.

The digestion must be made as nearly perfect as possible, and foods, drinks, and drugs that irritate the kidney must be prohibited. Intestinal fermentation must be avoided, and daily movements of the bowels must be secured. The diet should be carefully regulated, but the various articles allowed or forbidden vary according to the variety of calculus which the patient has passed,

or it is decided is deposited in the urinary passages. If a calculus of uric acid has been passed, or there are uric acid crystals in the urine, as pointed out by Dr. John B. Talmadge, of New York (*New York Medical Journal*, Sept. 25, 1909), the patient should not take foods which contain large quantities of nuclein, such foods producing uric acid. The meats to be avoided are "liver, kidney, thymus, fish roe, caviar, smoked or pickeled meats, and meat extracts." Talmadge would also prohibit "strong tea and coffee, asparagus, sugars, fats, farinaceous foods, and alcoholic beverages." He advises a diet "of meats which have been boiled to free them from the meat extractives, plenty of milk, eggs, bread, butter in small amounts, mild cheeses, jellies made with gelatin, and fruits in abundance, as the acids in these are not excreted as such by the kidneys."

If the concretions formed are uric acid or urates, uric-acid precursors, as above mentioned, should be avoided. Sugars, fats, and farinaceous foods need not be avoided as a class, though some individual starchy food may produce intestinal fermentation, and should be avoided. It is certainly best to reduce the frequency of the eating of meat to once a day, and it has been lately proved that alcohol in any form taken with a meal of meat tends to cause a decrease in the destruction of uric acid by the liver, or at least tends to cause an increased output of uric acid in the urine. Also, not all fresh fruits are advantageous, and cooked fruits are better than fresh fruits. Bananas, and especially roasted, are a valuable food. Prunes, especially cooked; oranges, if they agree with the individual; apples, if they agree, and especially cooked, are the fruits most satisfactory. Grape fruit is often inadvisable. Nuts (especially of the protein-fat type—almonds, peanuts, pignolias (pine nuts) —thoroughly chewed, are of value as food, and are generally readily digested.

It has lately been shown that potassium salts, such as the acetate, bicarbonate and citrate, tend to render the urine less likely to deposit urates and uric acid. This is not at all new clinically, but has only lately been demonstrated in the laboratory.

If the calculus passed consists of oxalate of lime or if oxalate of lime crystals occur frequently in fresh urine, the articles of food that should be especially prohibted, as tending to the formation of this salt, are, as enumerated by Talmadge, "spinach, rhubarb, beans, beets, tea, cocoa, gelatin, and all foods containing any great quantity of calcium (milk, eggs, vegetables of the cabbage family)." These foods, he states, contain a great deal of oxalic acid. The possibility of producing this substance from tea and cocoa is remote, and the amount that could be formed from beans is certainly small; hence these three articles of food could be allowed. Patients who have oxaluria should take "foods containing a high percentage of magnesium, as magnesium oxalate is easily soluble and thus oxalic acid is easily excreted." Such foods are "meat, fish, bread, farinaceous foods, and apples." Any of the magnesium salts also have this favorable chemical action in preventing the formation of calcium oxalate. Perhaps the best salt to administer is magnesium biphosphate (acid magnesium phosphate; the dose being 0.50 to 1 gram (7½ to 15 grains). If much is given it acts as a laxative.

If the calculus is phosphatic and the urine tends to deposit phosphates, the diet should consist largely of albuminous foods and foods containing organic acids. If much milk is taken, lactate may be administered at the same time, as it tends to keeps the phosphates in the intestines and prevents their absorption.

Nervous disturbances, pain, too much mental work, and worry will increase the output of phosphates, and such nervous tire should be prevented if possible.

Whatever the concretion may be that is deposited in the urine, oxidation and elimination should be promoted by general physical exercise, in the open air, and by bathing, especially warm bathing, and perhaps by other hydrotherapeutic or sweating measures.

The most useful medicinal treatments are the alkaline diuretics and the urinary antiseptics. Of the former class, potassium citrate, which is the pleasantest to take of the potash salts, should be administered in 1-gram doses (15 grains), every three hours, or in 2-gram (30-grain) doses, three or four times a day, preferably after meals. When taken with plenty of water it will, as above stated, aid in preventing uric acid and urate concretions. It is advisable, whatever may be the character of the calculi, that considerable quantities of water be drunk, preferably distilled water, as tending to aid in bringing about solution and keeping in solution the salts of the urine. It is often unwise for a patient to drink large quantities of an alkaline mineral water which may contain ingredients which are inadvisable for him to take into his system. It is also inadvisable to continue for any length of time alkaline salts in sufficient quantity to render the urine alkaline, as a prolonged alkaline urine tends to cause phosphatic deposits, tends to allow germs to grow, and mucous membrane irritation to occur in the urinary tract. Also a too long alkaline treatment is debilitating to the system; the loss of nitrogen is increased, and the weight is diminished. Alkalies tend to produce anemia, and iron must often be administered with the diet necessary to prevent uric acid deposits.

Of the class of urinary antiseptics, the one of most value is hexamethylenamin, which should be given in doses of from 0.25 to 0.50 gram (from 4 to 7½ grains), taken, dissolved, in a glass of water, three or four times a day.

If there is any pus in the urine or any infection is considered to be present, or an extra amount of mucus is produced, which tends so easily to form nuclei for depositions of salts in the urine, the best medicinal treatment is hexamethylenamina or phenyl salicylas (salol). If the urine is ammoniacal the patient should generally be given one of these drugs. Salol should not be administered if there is any kidney inflammation, or if there is albuminuria.

When there are urinary calculi, the condition of the circulation should always be carefully examined, and if there is any failure of the heart or any insufficiency of the heart muscle, or arteriosclerosis, large amounts of liquid should not be given, as the extra work put on the circulation is inadvisable. It is much better to overcome the tendency to the formation of calculi by a proper diet than by very large amounts of water under these conditions.

Tuberculosis in Children of the Tuberculous.—A. Pissavy has been collecting data in regard to the prevalence of tuberculosis in 569 households in France, some in towns and others in rural districts. In 469 of these households neither parent was tuberculous, but 123, that is, 8 per cent. of the total 1,428 children in these families acquired tuberculosis. In 100 other households one or both of the parents were tuberculous and 93 of the 292 children in these families contracted the disease, that is, about 31 per cent. The proportion of children contracting the infection averaged about the same in the country and town families. His communication was published in the *Bull. Soc. Méd. des Hôp.*, 1909, xxvi, 456.

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SATURDAY, DECEMBER 4, 1909

THE PHARMACOPEIA, ITS HISTORY AND ITS IMPORTANCE TO THE MEDICAL PROFESSION

The importance of the next Pharmacopeial Convention should be thoroughly understood by all medical societies and physicians. These conventions, as well as the national Pharmacopeia, originated in a proposition submitted to the Medical Society of the County of New York by Dr. Lyman Spalding in 1817. Dr. Spalding proposed that the United States be divided into four districts—northern, middle, southern and western—and that each district should hold a convention of delegates from the medical societies and schools situated within it, to formulate a pharmacopeia. The four district pharmacopeias were to be taken to a general convention to be held at Washington, composed of delegates from the four districts. From the district pharmacopeias the delegates were to compile a national pharmacopeia. This plan was adopted, the district convention for New England being held in Boston and the convention for the middle states in Philadelphia, June 1, 1819. No conventions were held in the southern and western districts, but delegates to the national convention were appointed. The first general convention for the formulation of a national pharmacopeia met at Washington, Jan. 1, 1820. The two pharmacopeias prepared in the northern and middle districts were consolidated into one work, which was published in Boston, December, 1820, in both Latin and English. A second edition appeared in 1828.

The convention of 1820 provided for its own perpetuation and for future revisions, by instructing its president to issue notices in 1828 to all incorporated state medical societies and incorporated medical colleges and schools, asking each to vote for three delegates to represent the district at the general convention to be held at Washington in January, 1830, the convention to consist of twelve delegates. The second convention was held at Washington on Jan. 4, 1830, thirteen delegates being present. It provided for its perpetuation by instructing its president to issue a notice to incorporated state medical societies, incorporated medical colleges and incorporated colleges of physicians and surgeons, asking each to elect three delegates to attend a general convention to be held at Washington in January, 1840. The district plan of representation was given up and has never been resumed.

At the third convention, held in 1840, twenty delegates were present. A committee on revision and publication was appointed which published the second revision of the Pharmacopeia in 1842. This committee was instructed to ask the cooperation of schools of pharmacy in its work.

In the call for the fourth convention of 1850, incorporated colleges of pharmacy were included and were allowed to send three delegates, the same as medical colleges. This convention, which met at Washington in May, 1850, was composed of thirty delegates. Only two pharmaceutical schools were represented, all of the other delegates being from medical colleges and societies.

In 1860 the fifth convention was held, thirty delegates being present, four colleges of pharmacy being represented.

The sixth convention was held May 4, 1870, sixty delegates being present, seven pharmaceutical schools being represented. The fifth revision was published in 1873.

The seventh convention met May 5, 1880. One hundred and nine delegates were elected to represent ten medical societies, twenty-three medical colleges, eleven pharmaceutical colleges and the medical departments of the Army, the Navy and the Marine-Hospital Service. Seventy-five delegates were present.

The eighth convention was held on May 7, 1890, 175 delegates being present, representing fifteen medical societies, twenty-three medical colleges, twenty-five pharmaceutical associations, twenty-three colleges of pharmacy and the medical departments of the three government services. The provisions made for representation in 1900 were the same as those for 1890.

The ninth decennial convention was held at Washington May 2, 1900. Forty-one delegates were present representing twenty-six medical societies, forty-four delegates from thirty medical colleges, fifty-three delegates from twenty-seven pharmaceutical colleges and fifty-seven delegates from twenty-eight pharmaceutical societies, the American Medical Association, the American Pharmaceutical Association and the three government services being represented by twelve members. The total attendance, as shown by the official report, was two hundred and seven, of which one hundred and fourteen were pharmacists and ninety-three were physicians.

The point to be emphasized in the above historical summary is that the convention was originally inaugurated and for many years carried on solely by the medical profession, and that it was not until 1850 that other than medical societies and medical colleges were authorized to send representatives. In that year, pharmaceutical colleges were for the first time given representation. Not until 1890 were pharmaceutical societies added to the list of accredited bodies.

The medical profession during the past thirty years has not given to the revision of the Pharmacopeia the attention which its importance deserves. In spite of the fact that this book originated with the medical profession and was compiled and published primarily for its use, it has come to be regarded too much by physicians as a book which is of interest and value mainly, if not solely, to the pharmacist and in which the physician is not especially concerned. The attitude of the physician toward the Pharmacopeia as well as the lack of knowledge on this subject has been frequently commented on in THE JOURNAL. It is now time that specific and lasting reforms were effected. Two definite steps should be taken before the meeting of the next convention in Washington: (1) All incorporated state medical associations and medical colleges entitled to representation should select the three best representatives possible and should see to it that they attend and take part. (2) Each county society should devote at least one meeting during the winter to a discussion of the present Pharmacopeia and the formulation of suggestions as to its improvement.

There is, indeed, grave danger lest this work, which was primarily a reflection of the needs of the medical practitioner, should become a purely pharmaceutical rather than a medical compilation. There is also danger of its being controlled by commercial interests. Such a result will be due solely to lack of interest and activity on the part of the medical profession. Active interest in this matter should be aroused and medical societies should see to it that they are properly and effectively represented in the coming convention, and that their delegates are instructed regarding the desires and opinions of those they represent. If every county society will devote one evening to the discussion of this question and will send its recommendations to Dr. Reid Hunt, chairman of the Committee of the American Medical Association on the Pharmacopeia or to the Council on Pharmacy and Chemistry of the American Medical Association, their recommendations will be transmitted to the convention and will receive consideration.

ARTHRITIS DEFORMANS

Nothing in medicine is more obscure than the pathogenesis of the chronic joint disturbances which we group, in order not to commit ourselves, under the descriptive term "arthritis deformans." One of the essential causes of our ignorance concerning them is a lack of thorough and extensive study of the anatomic changes which underlie the clinical manifestations, which is undoubtedly due in large part to the difficulty one meets in obtaining any considerable quantity of material of this sort. An extensive study of material from sixty-five cases, collected during eight years by Nichols and Richardson,[1] promises to clear up many of the misunderstandings and to furnish the sound anatomic basis which we must have before the etiology (and, depending on that, the therapy) can be worked out.

On account of the close relationship of the several kinds of tissues which make up the joints, it is possible for the same irritant to produce many different kinds of structural changes according as it acts on one or the other of these tissues; or, on the other hand, various agents may produce quite similar changes in the joints. As a matter of fact the lesions found, irrespective of what the clinical features or apparent etiology may have been, fall distinctly into one of two categories, proliferative and degenerative. It being a general law of pathology that the same agent may cause either proliferation or degeneration, in accordance with concentration, tissue nutrition, and other factors, it follows that these two pathologic groups do not correspond to two different sets of etiologic factors or to two different diseases, but merely represent different effects from similar causes, or similar effects from different causes. Clinically, however, there are well-marked differences, corresponding to the degenerative and proliferative types of joint changes, when either of these types occurs in a sufficiently distinct way.

The proliferative joint changes usually predominate in the cases of arthritis which begin rather acutely, resembling acute rheumatism at first, and involving more often persons under 50 than older, and the clinical course is characterized by attacks and remissions of the joint symptoms, often terminating in complete ankylosis. With the pronounced degenerative type of lesions is commonly associated a history of insidious onset, usually affecting older people, and causing great anatomic alterations in the joints with but little tendency to produce actual ankylosis. But, since the presence of proliferative changes in one part of a joint may cause degenerative changes in another part, or conversely, it is evident that both anatomic changes and clinical manifestations are often of mixed character. It is also evident that, once the injury in the joint has been started, a vicious circle is readily established, for a primary degenerative change may start up proliferative processes in the neighborhood, and, these causing degeneration of opposed surfaces, the process becomes progressive; hence the bad prognosis of arthritis deformans and the mixed anatomic picture which has caused so much confusion of classification and pathology. Once the joint injury has become well established, therefore, the pathologic changes may continue even when the original etiologic factor has disappeared, and when this factor is a chronic persistent one the course of the disease must necessarily be downward. In earlier stages the prognosis is better if the exciting cause can be removed, and hence the importance of establishing the etiology of the joint changes. As already intimated, we are commonly at a loss as to etiology, partly because of previous lack of understanding of the pathology, and

1. Nichols and Richardson: Jour. Med. Research, 1909, xxi, 149.

partly because of the extremely varied causes which may start up joint changes that eventually terminate in chronic arthritis. Nichols and Richardson believe, from their studies, that there is no one specific cause, as some have maintained, but that the same anatomic results may come from the most different causes. Sometimes acute infection begins the joint changes, sometimes chronic trauma, but more often, in all probability, some soluble irritant, presumably of metabolic origin, selectively affects the joints and adjacent bone tissue. With the careful study of the pathology which these authors have supplied for a basis, the search for the etiology should now make more substantial progress than it has heretofore realized.

SUDDEN DEATH DURING ANESTHESIA

Although we have not yet ascertained the nature of the chromaffin substance which Kohn found in the adrenals and other related organs of sympathetic origin, yet that it is of essential importance to the function of these organs is unquestionable, for its presence and quantity stand in direct relation to their functional capacity. For example, Wiesel found that in Addison's disease there was an absence or paucity of the chromaffin substance not only in the adrenals, but also in the other organs of the so-called chromaffin system. Conversely, in cases of destruction of the adrenals by malignant growths without resultant Addison's disease, it has been found that the chromaffin cells in the other organs were well supplied with their specific content, thus explaining why destruction of the adrenal had not resulted in the familiar symptom-complex of Addison's disease. These and other observations indicate that the amount of chromaffin substance present in the tissues is an index of their functional capacity; and this permits of study of the relation of these tissues to various disease processes.

At the present time the chief property which can be ascribed to the chromaffin system is that of stimulating vascular tonicity; and Hornowski, struck by the similarity of the conditions presented by persons dying suddenly during or after surgical anesthesia, to the manifestations of shock, which is essentially a loss of vasomotor tone, began an investigation of the condition of the chromaffin system in death following operations. In four such cases he found constantly a decrease in the chromaffin substance,[1] and he was able to cause a similar reduction in the chromaffin substance experimentally in rabbits by prolonged or repeated anesthetization. This effect he ascribes chiefly to the action of the chloroform, explaining it as follows: Chloroform lowers the blood-pressure, and the chromaffin system is stimulated to neutralize this decreased vasomotor tone; if the stimulation of this system is too violent or protracted, or if previous shock, trauma or infection have injured or overworked the chromaffin cells, they become exhausted and unable to replenish the supply of vasostimulating substance, death resulting from vasomotor paresis. In such cases microscopic examination shows a striking absence of chromaffin substance in the usual locations, whereas when no vascular paresis results from anesthesia and operation, because of adequate compensation by the chromaffin cells, the brown color of this tissue is very pronounced on account of the quantity of stored chromaffin substance.

Schur and Wiesel have also found that the chloroforming of rabbits decreases the staining of the chromaffin cells by chromic acid, and they, too, suggested that this effect of chloroform may account for sudden deaths during anesthesia. Hornowski shows, in addition, that surgical trauma, previous injury or pain, and infection also have a similar effect, so that the exhaustion of the chromaffin system during anesthesia may be more properly ascribed to the added influence of these causes, the chloroform by its depression of vascular tone completing the depletion of blood-pressure-raising substance. Although Schwarzwald[2] and others have not always found demonstrable decrease in chromaffin material in all persons dying during anesthesia, yet the positive results of experiments and the positive autopsy findings that have been recorded are sufficient to indicate the possibilities of this line of research. An interesting observation made some time ago by Hedinger[3] carries support to Hornowski's theory. He found that in status lymphaticus, in addition to the lymphatic hyperplasia, there is a marked hypoplasia of the chromaffin system, analogous to that seen in Addison's disease. Since the most striking effect of the status lymphaticus is sudden death following trivial shock or trauma, this deficiency of the chromaffin system is significant; furthermore, not a few deaths in status lymphaticus have occurred during anesthesia.

THE VALUE OF INDEXED CASE RECORDS

To those who are unfamiliar with the advantages of a system of classifying and indexing case histories the keeping of such records may appear like an entirely unnecessary and laborious piece of work. If the habit is once formed, however, it will be found to be of the greatest help in clarifying the worker's conception of the field in which he is working, and an incentive to more precise observation. If an effort is made at regular intervals—once a week, for example—to record in black and white the diagnosis of every case that has been seen during that interval it will afford a very interesting and instructive review, and the perspective thereby gained will not infrequently serve to clear up obscure points and to suggest practical points as to prognosis and treatment as well as diagnosis. If the observer is thoroughly

1. Hornowski: Virchow's Arch. f. path. Anat., 1909, cxcviii, 93.

2. Schwarzwald: Verhandl. d. deutsch. path. Gesellsch., 1909, xiii, 269.

3. Hedinger: Verhandl. d. deutsch. path. Gesellsch., 1907, xi, 29.

honest with himself and takes refuge in no obscure terms or uncertain diagnoses it will inevitably be found that in a fair proportion of his cases a decision must be definitely or indefinitely postponed. Necessary data will be found wanting in certain cases; diagnostic points which have been overlooked and which might throw light on the problem come to mind, with the result that at the next interview with the patient these points will be noted and the condition will be better understood. As the records grow, their value will be constantly increased by a properly made index, rendering early material available for study and comparison with recent cases. This advantage of the index will be enhanced if, besides the record of diagnoses, there is kept an index of signs and symptoms. While such an indexed record would necessarily be voluminous, it could be kept within bounds by recording only the important and unusual phenomena, while the observer could accumulate data on any particular subject in which he was interested to the limit of his material and time. An outline of a system for classifying and indexing case records was published in THE JOURNAL early this year.[1]

So far as the question of time is concerned, the actual work of writing requires far less than might be imagined, and the time spent in thinking over the problems which present themselves is far better spent in this way than in unsystematic study of abstract problems. Besides the advantage of obtaining a clearer and more intimate knowledge of the individual patients which is afforded by such a review, there is much interest and profit in grouping the various conditions and comparing the features which serve to distinguish the different groups. Certain pathologic conditions may be found to be associated in a number of instances with subsidiary or secondary processes, which may or may not be emphasized in familiar literature; but such a personal observation would be of far more value to the practitioner than could any familiarity with the published opinions of others. Suggestions of this nature frequently present themselves in a study of groups of cases, and in turn serve as a potent stimulus to more thorough observation of the individual patients. The same association will be looked for in new patients presenting one or the other of the conditions noted, the suggested hypothesis being proved or disproved as the series is enlarged. In short, such a system places the "experience" of the observer on a foundation of relatively certain facts, instead of on the vague impressions which so often constitute the basis of authority.

It may be asserted with some truth that there is danger of being misled by reliance on an insufficient amount of evidence, but, as every worker must trust to some extent to his own observations, it is just as well that he should have as exact a knowledge as possible of what his own observations really are. This exact knowledge is no more reason for the student's being intolerant of the experience of others than ideas based on a less certain foundation would be. It should be needless to add that any notes embracing data from the misty side of the region that separates the known from the "guessed at" are worse than useless.

1. Black, Carl E.: System in Recording Cases, THE JOURNAL A. M. A., March 6, 1909, lii, 762.

ALTMANN'S GRANULES IN TUMOR CELLS

Some time ago it was shown by Altmann that the glandular cells of vertebrates contain well-defined granules which can be specifically stained with acid fuchsin, their number varying with the nature and functional activity of the cells examined. These granules are most commonly called "Altmann's granules," but also "fuchsinophil granules" and "plasmosomes." Similar but smaller granules have been described in plasma cells and lymphocytes by Schridde. A study of the distribution of these intracellular granules in human tissues in normal and pathologic conditions, including particularly tumors, has been made by Beckton, with interesting results which may prove to be of much practical importance.[1] He finds that the granules of the glandular epithelium are probably different from those of the stroma cells, as the former can be fixed by formalin, while the latter are fixed only by bichromate solutions. The presence of abundant granules of the latter type in plasma cells, lymphocytes and fibroblasts supports the contention that these cells have a secretory function, since Altmann's granules are supposed to have to do with secretory activity.

In inflammatory conditions these cells, as well as the proliferating endothelial cells, are found to contain abundant granules, whether the process is acute or chronic. In tumors, however, a suggestive observation was made, namely, that in malignant tumors of all kinds the Altmann granules are absent from the cancer cells, or else are scanty, while in benign tumors they are present in much the same proportion and form as in the normal tissue which the tumor replaces. The importance of this finding lies in two directions: first, it may point the way to an improvement in our differential diagnosis of malignant tumors from benign tumors and from inflammatory conditions; second, it has suggestive bearing on the biology of tumor cells. Thus, as Lazarus-Barlow points out, the absence of Altmann's granules from cancer cells shows that such cells are fundamentally different from the normal cells from which they arose. This difference may be regarded as an expression of deviation from, or loss of, normal function.

If Beckton's observations are confirmed by those who repeat his work—and it will undoubtedly soon be repeated—the differential microscopic diagnosis of cancer will become much easier and more certain than it now is.

1. Beckton: Jour. Path. and Bacteriol., 1909, xiii, 185; Arch. Middlesex Hosp., 1909, xv, 182; Brit. Med. Jour., Sept. 25, 1909.

THE RESPIRATORY HIPPUS

A recent note by Roch and Campiche[1] calls attention to an unusual phenomenon, which they had previously described and designated as "the respiratory hippus." This phenomenon, which consists of an inspiratory dilatation and expiratory contraction of the pupils, has been noted also by Wiesenger[2] and by several Italian observers, but its significance is still a matter of doubt. In the cases seen by Roch and Campiche it was always associated with a pulsus paradoxus, and, in their opinion, might be explained on the same grounds, namely, an abnormal respiratory variation in blood-pressure due to unusual variations in the intrathoracic pressure, especially when associated with myocardial weakness.

Medical News

GEORGIA

District Society Meetings.—The Fifth Congressional District Medical Society held its fifth annual meeting in Atlanta October 5. The session was devoted to the discussion of pellagra. The following officers were elected: President, Dr. Hugh M. Lokey, Atlanta; vice-president, Dr. William D. Travis, Covington, and secretary-treasurer, Dr. J. Ross Simpson, Atlanta.——The Tenth District Medical Society, at its annual meeting, held in Augusta, November 9, elected the following officers: President, Dr. Noel M. Moore, Augusta; vice-president, Dr. Joshua R. Beall, Blythe; secretary-treasurer, Dr. George A. Traylor, Augusta; and district councilor, Dr. Wyman W. Pilcher, Warrenton. The principal address was delivered by the president-elect on "Pellagra."

ILLINOIS

New Hospital for Sterling.—The charter for the Whiteside Public Hospital, Sterling, has been applied for and is expected to be granted in a short time. The prospects for the success of the institution are excellent, as both the laity and physicians of the city are interested in the project.

Physicians' Club Organized.—A club has been organized in Lewistown, whose membership comprises all the physicians in the city. The following officers have been elected: Dr. D. D. Talbott, president; Dr. Eli G. Davis, vice-president; Dr. William S. Strode, secretary; and Dr. Samuel Oren, treasurer.

Personal.—Dr. William E. Washburn, Kewanee, received internal injuries in the overturning of his automobile at Cherry, November 21.——Dr. Charles E. Colwell, Aurora, has been elected president; Dr. Oliver H. P. McNair, Batavia, vice-president, and Dr. R. S. Denney, Aurora, secretary-treasurer of the Aurora Hospital.

The New Cook County Infirmary.—All of the buildings of the new Cook County Infirmary, on which work was begun last spring, are under roof, and the present indications are that the institution will be ready for occupancy by the middle of January. The institution, when completed, will have cost $1,750,000, and will accommodate about 1,800 inmates, with ample provision in the general scheme for the erection of additional buildings as required. On the highest spot on the grounds has been built the hosiptal for tuberculosis patients, 300 feet away from the nearest building of the central group.

Chicago

Cornerstone Laid.—The cornerstone of the addition to the Norwegian Lutheran Deaconess Home and Hospital was laid November 25. The new building is to cost $75,000.

Explosion in Hospital.—An explosion in the furnace of the American Hospital, November 28, wrecked the heating plant and created much alarm. The patients in the building escaped injury, as the physicians and nurses were promptly on hand and prevented a panic.

Certified Milk in Chicago.—Dr. Charles S. Bacon, in his illustrated talk on this subject in the Public Library building, November 27, spoke of the organization of the Milk Commission of the Chicago Medical Society, and stated that three country dairymen had been induced to sign contracts drawn up after the pattern of the national form, and had agreed to conform to the rigid demands of the commission. In return for this, the commission gives each dairyman a copyrighted trade mark bearing the certification of the society, which appears on the label or stopper of every bottle.

KENTUCKY

Personal.—Dr. Alexander Vertes, Louisville, has returned from abroad.——Dr. Matthias R. Perry, Russellville, has succeeded Dr. M. E. Alderson, Russellville, as physician of Logan county.

Society Election.—Hardin County Medical Society has elected the following officers: Dr. Clyde C. Carroll, White Mills, president; Dr. D. Elmo McClure, Sonora, vice-president; Dr. John M. English, Elizabethtown, secretary-treasurer, and Dr. C. T. Riggs, Upton, delegate to the State Medical Association.

Babies' Milk Fund.—The Babies' Milk Fund Association of Louisville, in its second annual report, showing the work done during the summer of 1909, states that at the beginning of last October the association had to its credit six distributing stations and one laboratory in operation; six graduate nurses, four assistants, four supervisors and one assistant supervisor on duty; twelve weekly consultations held; affiliation with eighty-two physicians; registration of 284 children; 2,300 visits made by nurses to homes; $2,900 collected and 34,000 bottles of milk distributed.

MASSACHUSETTS

New Hospital Opens.—The Rufus S. Frost Hospital, Chelsea, opened its new building informally, October 11, to the members of the medical profession and representatives of the state and city. The hospital is built on the site of the Rufus S. Frost homestead and is three stories in height, flanked with two-story wings. The right wing is devoted entirely to surgery, including a maternity ward; the left wing to medical wards and private rooms. There are seventy-eight beds in the institution. The medical and surgical staff is as follows: Chairman, Dr. E. Frank Guild; secretary, Dr. George B. Fenwick and Drs. Charles N. Cutler, Frank A. Mahoney, Francis B. McClintock, Edward J. Powers, Frederick H. Plummer, Frank S. Garrett, John M. Wells, Joseph B. Fenwick, John M. Doran and John G. McPhail, all of Chelsea; Drs. J. Stewart Morris and William C. Newton, Revere; Dr. Horace E. Bragdon, East Boston, and Dr. William J. Porter, Winthrop. The consulting staff consists of Drs. George H. Cunningham, Jr., George W. W. Brewster, LeRoi G. Crandon, Arthur T. Legg, Philip Hammond and Frederick M. Spalding, all of Boston.

MARYLAND

Concentration of Colleges.—Senator Linthicum proposes a concentration of medical and other colleges which receive state aid into a state university, to be governed by a board of regents.

Appropriations Asked.—The State Board of Aid and Charities has been asked for the following annual appropriations: College of Physicians and Surgeons, Baltimore, $5,000; Maryland Medical College, $4,000; Baltimore Medical College, $5,000; University of Maryland, $4,000; Medical and Chirurgical Faculty of Maryland, $10,000; and the Maryland Asylum and Training School, $50,500 for maintenance and $52,500 for new buildings.

County Society Election.—Queen Anne's County Medical Society, held its annual meeting at Centerville, November 12. The following officers were elected: President, Dr. Ernest F. Smith, Centerville; vice-president, Dr. James W. Stack, Wye Mills; secretary-treasurer, Dr. Laura E. Reading, Hayden; delegate to the Medical and Chirurgical Faculty of Maryland, Dr. Norman S. Dudley, Church Hill, and censors, Drs. William G. Coppage, Church Hill; Wesley W. Chairs, Queenstown, and Walter H. Fenby, Ruthsburg.

Baltimore

Goldberger Prize Awarded.—Dr. Clemens von Pirquet, Johns Hopkins University, has been awarded the Goldberger Prize of 2,000 crowns by the Imperial and Royal Society of Physicians of Vienna on account of his discoveries of certain phases of immunity and skin reaction in the diagnosis of infantile tuberculous lesions. This prize is awarded every three years for research work in experimental medicine.

New Buildings on Johns Hopkins Grounds.—The contract has been awarded by the Johns Hopkins trustees for the building of the Phipps Dispensary on the hospital grounds, at a cost of $500,000. The building will be five stories in height,

1. Roch, M., and Campiche, L.: Coexistence de l'hippus respiratoire et du pouls dit paradoxal, Rev. de méd., 1909, xxix, 661; abstr. in THE JOURNAL A. M. A., Sept. 18, 1909, liii, 979.
2. Wiesenger: Charité Ann., 1904-05, xxx, 591.

fire proof and will correspond with the other buildings of the group.——The Harriet Lane Johnson Home for Crippled Children is to be erected on the grounds of Johns Hopkins University at a cost of $300,000.

Personal.—Dr. A. M. Foster, superintendent of the Eudowood Hospital for Consumptives, near Baltimore, has resigned, to take charge of the Louisville Antituberculosis Association and Municipal Tuberculosis Department.——Dr. Gustavus Charles Dohme is said to be critically ill with uremia.——Dr. Thomas H. Buckler, president of the Paint and Powder Club, has resigned.——Dr. Ira Remsen, president of the Johns Hopkins University, has been made president of the Charity Organization Society.——Dr. John S. Fischer sailed for Europe November 27.

MISSOURI

Tag-Days.—Hospital Tag-Day in St. Louis, November 27, is reported to have netted more than $30,000 for the hospitals of the city.——St. Joseph collected more than $7,500 for charity at its first tag day, November 21.

Antituberculosis League Formed.—The Louisiana Antituberculosis League was organized November 15. Dr. James W. Dreyfus was elected president, and Drs. Joseph B. Unsell a member of the executive committee.

County Society Meetings.—The Caldwell County Medical Society, at its annual meeting, October 27, elected Dr. Benjamin F. Carr, Polo, president; Dr. Stephen D. Smith, Cowgill, vice-president, and Dr. George W. Goins, Breckenridge, secretary-treasurer.——Howard County Medical Association, at its annual meeting held in Fayette, November 5, elected the following officers: President, Dr. W. B. Kitchen, Glasgow; vice-presidents, Dr. Thomas C. Richards, Fayette, and Joel Y. Hume, Armstrong; secretary, Dr. Charles W. Watts, Fayette; member of the house of delegates, Dr. Joel Y. Hume, Armstrong; and censors, Drs. Charles O. Lewis, Fayette, Andrew W. Moore, Fayette, and Vaughan Q. Bonham, Fayette.

State Bureau of Vital Statistics.—The State Bureau of Vital Statistics, which was provided for by the last legislature, and which is in charge of the state board of health, is now in process of organization, and will be in full operation January 1 next. Dr. Frank B. Hiller, secretary of the State Board of Health, is registrar for the central bureau. The law prescribes that each city and incorporated town shall constitute a registration district, and for the convenience of the rural profession of the state these sections will be divided into rural districts. All births and deaths must be reported to the local registrar, who in turn reports to the central bureau on the tenth day of each succeeding month. No burial or other disposition of a dead human body can be made without first securing a burial or transit permit from the local registrar. The certificate, in addition to the fact of death, will furnish statistics regarding mortality from various diseases, nationality, occupation, conjugal relation, age, sex, etc., also mortality by cities, towns, and rural districts. Missouri is said to be the first state in the Union to put into practical use the new United States standard death certificate.

NEW HAMPSHIRE

Medical Society Meeting.—The Rockingham County Medical Society held its fifth annual meeting in Portsmouth November 11. The following officers were elected: President, Dr. Elbert A. Landman, Plaistow; vice-president, Dr. Thomas W. Luce, Portsmouth; secretary, Dr. Walter Tuttle, Exeter; treasurer, Dr. Alice M. M. Chesley, Exeter; censor, Dr. John H. Neal, Portsmouth, and delegate to the state society, Dr. John W. Parsons, Portsmouth.

NEW YORK

State Board Approves.—The State Board of Charities has approved the certificate of incorporation of the Newburgh Tuberculosis Sanatorium which is to be the gift of former Governor B. B. Odell.——Approval has also been given to the consolidation of the New York Infant Asylum and the Child's Nursery. This consolidation, when ratified by the Supreme Court, will unite institutions whose joint resources are about $1,000,000, and whose annual expenditures at present are more than $200,000.——The incorporation of the Southampton Hospital Association, which proposes to establish a general hospital at Southampton, L. I., as well as the incorporation of the Lakeview Home, were approved by the board.

Bequests to Charities.—By the will of the late John S. Kennedy, $2,250,000 is devised to the Presbyterian Hospital, $25,000 to the New York Infirmary for Women and Children, and $10,000 each to the Manhattan Eye and Ear Hospital, the New York Orthopedic Dispensary, the Fordham Home for Incurables, and the New York Society for the Relief of the Ruptured and Crippled.——By the will of the late Mr. Mitchell Valentine, one-half the residue of an estate, after the payment of certain small bequests, is bequeathed to the Presbyterian Hospital. The value of the bequest is estimated at $1,000,000. ——The will of the late Emanuel Einstein bequeaths $10,000 to Mount Sinai Hospital and $5,000 to the Montefiore Home for Chronic Invalids.

Radium Institute of America.—At a recent meeting at the New York Yacht Club a society was formed for the study of radium, to discover any radiferous deposits in the United States and to buy quatities of the substance in Europe for clinical use in the United States. The idea of the founders of this society is to establish a clinic in connection with some hospital where radium treatment will be administered free to those who need it. They will endeavor to protect the public against the claims of patent-medicine manufacturers. The following officers were elected: President, Dr. Charles F. Chandler, professor of chemistry in Columbia University; vice-president, Dr. Robert Abbe; secretary, Prof. William Hallock, of the Department of Physics, Columbia University; assistant secretary, Prof. George B. Bertram of the same department; treasurer, Dr. Hugo Lieber, manufacturing chemist.

Tuberculosis Preventorium for Children.—The report of the first preventorium established in the United States emphasizes the fact that prevention of tuberculosis is easier and better than its cure, as overcrowding breeds disease, and quicker results from the relief of congestion are obtained by taking children of tuberculous patients into the country before the infection takes deeper root and the change is absolutely necessary. In this way it is noteworthy that within three months children may be fully restored to health. This work was influenced and made possible by Mr. Nathan Straus, who presented the Grover Cleveland Cottage and eight acres of pine land surrounding it, and the majority of stock in the Lakewood (N. J.) Hotel property, in which his investments amount to half a million dollars. Possession was taken of the cottage in May; the porch was arranged for six beds and the house for fourteen. The girls were all placed in this cottage, and in addition rooms for the matron and the help were provided and a dining room with accommodation for from forty to fifty children. Near the cottage has been built an open-air camp about 100 feet long to accommodate twenty boys. Since the opening of the institution, ninety-two boys and girls ranging from 4 to 14 years of age have been received. During their stay they have been in good health, showing steady improvement in general condition and gaining in weight. Plans are being made to increase the capacity of the institution to 400 children by next summer. The preventorium proposes not only to treat such children as need help but to carefully "follow up" such children and look after their welfare for some time after they have been discharged from the preventorium. A department of industrial education is to be arranged to include carpentering, cobbling, basketry, weaving, stencil work, medal work, etc. This department has been endowed by Miss Dorothy Whitney with $100,000, the interest of which will pay for instruction, tools, and materials. The medical service of the institution has been in charge of Dr. Alfred F. Hess, who has visited the institution at least once a week and has kept in touch with details. Drs. Abraham Jacobi, Hermann M. Biggs and Sigismund S. Goldwater has aided materially by their expert advice, in bringing about a practical organization.

New York City

Hospital for East New York.—Plans for the new Bradford Street Hospital in the East New York section of Brooklyn have been filed. The hospital will cover an entire block and will have a capacity of 100 beds. The estimated cost will be $350,000.

Lower Temperature in School Rooms.—Dr. C. Ward Crampton, director of physical training in public schools, has sent out a notice to all school teachers ordering them to keep the temperature of school rooms at 68 degrees instead of 70 as has been the practice. Dr. Crampton holds that the pupils will do better work if the air is cooler, and it is stated that there is likely to be a further general reduction of temperature in a short time. In England the school rooms are kept at a mean temperature of 60 degrees.

Neurological Institute Opened.—The New York Neurological Institute for the treatment of nervous and mental diseases, said to be the first of its kind in the United States, was opened this week at 149-151 East Sixty-seventh street. The building is six stories in height and fireproof. Dr. Joseph Collins is chief of staff of the medical board, and associated with him are Drs. Pearce Bailey and Joseph Fraenkel, assistant physicians; Dr. Smith Ely Jelliffe, alienist; Dr. Moritz Gross, in charge of the hydropathic department; Dr. Augustin A. Wolf,

in charge of the electrotherapeutic department; Dr. D. M. Kaplan, in charge of the laboratory; and consulting physicians, Drs. Charles L. Dana, Francis P. Kinnicutt, Hermann M. Biggs, and Bernard Sachs, Dr. George G. Taylor is house physician. Much of the work done is on a charity basis, but patients may be taken at a cost of from $10 to $15 per week. The dispensary is to be open daily for charity cases only. The special province of the institute is the treatment of nervous and mental diseases with the minimum of medical and surgical interference.

OKLAHOMA

Physicians to Withdraw Advertisements.—Jefferson County Medical Society has asked all physicians belonging to the society to withdraw their advertisements from local newspapers.

Tuberculosis Exhibition.—Under the auspices of the State Medical Association and the State Board of Health, a convention on tuberculosis and exhibition will be held at Oklahoma City, January 10 and 11, at which ways and means will be discussed for the prevention and eradication of tuberculosis.

Personal.—Dr. John W. Riley has been selected as commissioner of health of Oklahoma City.——Dr. Benjamin F. Hamilton has been appointed physician in charge at the Government Indian School, Shawnee.——Dr. James H. Proffitt, Oklahoma City, was seriously injured in a collision between an interurban car and an automobile, September 3.

Cornerstone Laid.—The cornerstone of the new hall of the University of Oklahoma, Norman, was laid November 16, with Masonic ceremonies. The new building will relieve the crowded condition of the medical department of the university, to which it has been subjected since the destruction by fire last year of one of the largest buildings of the institution.

Licenses Revoked.—The license of Dr. J. M. Means, Claremore, charged with performing a criminal operation, is said to have been revoked, October 13, by the State Board of Medical Examiners. At the same session the license of Dr. Leander M. Overton, Guthrie, was revoked on the ground that he was a graduate of a medical college whose diploma was not recognized by the board. Dr. Overton has filed suit against the State Board, and has asked that it be enjoined from molesting him in the practice of medicine.

Antituberculosis League Organized.—The Oklahoma Colored Antituberculosis League was organized in Oklahoma City, November 18, at a meeting held in conference with Dr. John C. Mahr, Shawnee, state superintendent of health. A local organization in every negro church in the state is planned, and a vice-president is to be appointed to organize the colored people of each county in their campaign against tuberculosis. Dr. Horace W. Conrad, Guthrie, was elected president; W. E. Brooks, Shawnee, secretary; and Dr. Riley A. Ransom, Sewell, treasurer.

SOUTH CAROLINA

Student Magazine is Issued.—The first issue of the *Aesculapian*, a monthly journal issued by the students of the Medical College of the State of South Carolina, Charleston, appeared November 18.

State Board of Charities Needed.—At the state convention of charities and corrections, which met in Columbus, November 19, a resolution was adopted asking the legislature to establish a state board of charities.

Personal.—Drs. Edgar A. Hines, Seneca, and William Eggleston, Hartsville, have been appointed members of the executive committee of the State Board of Health, vice Dr. J. Adams Hayne, Greenville, and Dr. James Evans, Florence, deceased. ——Dr. J. Sumter Rhame, Charleston, has returned from abroad.——Dr. A. Robert Taft has been elected professor of materia medica in the Medical College of South Carolina, Charleston, vice Dr. John Forrest, resigned.

Society Meetings.—At the annual meeting of the Fourth District Medical Association, held in connection with that of the Pickens County Medical Association at Easley, November 15, Dr. William A. Tripp, Easley, was elected president; Dr. Curran B. Earle, Greenville, vice-president, and Dr. Ernest W. Carpenter, Greenville, secretary-treasurer.——At the annual meeting of Lexington County Medical Society, held in Lexington, October 4, Dr. Frank R. Geiger, New Brookland, was elected president; Dr. Rufus E. Mathias, Irmo, vice-president; and Dr. James J. Wingard, Lexington, secretary (reelected).

PENNSYLVANIA

Tuberculosis Mortality.—According to a report issued by the State Department of Health, November 24, the deaths from tuberculosis reached 10,211 in 1908, a decrease of 614 from the number reported in 1907. The report shows that the average age at death was 35.5 years. Sixty-six per cent. of all deaths from this cause occurred between the ages of 25 and 64.

Hospital Suit Dismissed.—On November 24, Judge Brommall, of Media, non-suited the damage cases of Joseph Gallagher and Charles Firth against the Chester Hospital, on the ground that a public charitable institution is not responsible for the negligence of its agents, servants or employees. Legal action, he said, could be taken against the parties responsible but not against the institution.

Tuberculosis Sanitarium for Teachers.—A private sanitarium for the treatment of tuberculosis is to be established at Mount St. Michaels' Seminary, Berks county. The institution is to be erected on a tract of 52 acres of land, 600 feet above sea level. The sanitarium will be devoted exclusively to the treatment of tuberculosis in sisters teaching in the Roman Catholic parochial schools of Pennsylvania.

Personal.—Dr. F. R. McGrew, of Carnegie, was recently seriously injured by a collision between his automobile and a railway train.——Dr. Orlando Logan, Girard, the oldest physician in the Erie County Medical Society, has been presented with a cane by the society.——Dr. Edward B. Mathiot, Pittsburg, was seriously injured in a runaway accident November 23.——Dr. W. H. Chambers has succeeded Dr. W. M. Downey, resigned as a member of the board of health of McKeesport. ——Dr. Benjamin Thompson, Landenburg, is ill with cerebral hemorrhage.——Dr. Frederick A. Rupp has resigned as a member of the Lewistown Board of Health.

Philadelphia

Build Nurses' Home.—Work is to be immediately started on a four-story building to be used as a nurses' home at the Philadelphia General Hospital to cost $13,000.

Personal.—A destructive fire occurred in the home of Dr. John K. Mitchell, November 22, the damage amounting to about $5,000.——Dr. Edw. E. Montgomery was the guest of honor at the regular meeting of the Buffalo Academy of Medicine, November 26.

Bequests.—The will of the late Rebecca Hay bequeathes $20,000 to the Presbyterian Orphanage and $10,000 to the Presbyterian Hospital for the support of free beds.——By the will of the late Anna J. Van Reed of Reading, the Medico-Chirurgical Hospital receives $13,000.

The Alvarenga Prize.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, amounting to about $180, will be made on July 14, 1910, provided that an essay deemed worthy of the prize shall have been offered. Essays intended for competition may be on any subject in medicine, but cannot have been published. They must be typewritten, and must be received by the secretary of the college on or before May 1, 1910. Each essay must be sent without signature, but most be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author. The successful essay or a copy of it is to remain in possession of the college; other essays will be returned on application within three months after the award.

TENNESSEE

Health Day.—In accordance with the annual custom, November 19 was observed as public health day throughout the state. Literature was sent by the state superintendent of education to all schools, and addresses were made at the various schools by physicians on that day.

Personal.—Dr. Charles F. Forgey, Columbia, who has been a patient in St. Thomas Hospital, Nashville, has returned home. ——Dr. Arthur H. Gray, Nashville, has been made superintendent of the new hospital at Seattle, Wash.——Dr. James T. Jones, Jackson, has been elected president of the city board of health.

Medical College in Hands of Receiver.—The Tennessee Medical College, Knoxville, now known as the Medical Department of Lincoln Memorial University, is said to have been placed in the hands of a receiver, November 2, by the chancery court, following the filing of a bill by several creditors of the institution. Dr. Walter S. Nash, Knoxville, was named as receiver.

Knoxville Antituberculosis Society.—At a meeting of the board of directors of the Knoxville Association for the Prevention and Cure of Tuberculosis, November 1, it was decided to apply for a charter of incorporation so as to legalize the society and place it on a firmer foundation. Dr. William R. Cochrane, secretary of the city board of health, was elected a director, vice Dr. Chalmers Deadrick, resigned.

TEXAS

Quarantine Raised.—By proclamation of the governor, the quarantine against ports south of 25 degrees north latitude was raised November 1.

Medical Students Issue Paper.—The *Microbe*, a monthly publication issued by the students of the Medical Department of Fort Worth University, made its initial appearance November 1.

Personal.—Dr. Paul Renger, city physician of Hallettsville, has been appointed physician for Lavaca county.——Dr. Zachary T. Scott, Clifton, has succeeded Dr. Lewis B. Bibb, resigned, as registrar of vital statistics of the state——Dr. Cyrus B. Weller, Austin, has been appointed assistant city health officer.

Innovations Advocated.—Superintendent Nichols of the Southwestern Insane Hospital, San Antonio, in his annual report, recommends the building of an east wing on the infirmary to cost $6,000; the erection of a natatorium and bath house to cost $12,000, and the purchase of a sight-seeing motor car with seating capacity of twenty-five, for the use of patients.

Constitutionality of Medical Law to Be Tested.—The constitutionality of the one-board medical act, passed by the thirtieth legislature, is to be tested in the United States Supreme Court. Presiding Judge Davidson of the court of criminal appeals, on November 9, granted a writ of error to the United States Supreme Court in the case of Ira Collins, El Paso, who was fined for practicing osteopathy without having obtained a license from the board. The court held that osteopaths, although they do not use medicine in practice, come within the provisions of the act.

Elect Officers.—At the annual meeting of the Northeast Texas Medical Association, held in Marshall, November 16, Dr. Holman Taylor, Marshall, was elected president; Dr. Walter J. Matthews, Mount Pleasant, vice-president; Dr. Robert H. T. Mann, Texarkana, secretary; and Dr. Charles A. Smith, Texarkana, treasurer. The next meeting of the association will be held in Texarkana.——At the meeting of the Seventh District Medical Society in Austin recently, Dr. Washington A. Harper, Austin, was elected president, vice Dr. Matthew A. Taylor, Austin, deceased.——Wise County Medical Society, at its annual meeting, held in Decatur, November 18, elected Dr. John A. Embry, Decatur, president; Dr. Elden H. Foster, Bridgeport, vice-president; Dr. John F. Ford, Decatur, secretary; Dr. Ambrose C. Bramlett, Decatur, treasurer; Dr. B. M. Jones, Boyd, censor, and Dr. Leopold H. Reeves, Decatur, delegate to the state association.——The Lone Star State Medical, Dental and Pharmaceutical Association held its annual meeting in Houston, November 9-11, and elected the following officers: President, Dr. Napoleon J. Atkinson, Greenville; vice-president, Dr. Russell F. Ferrill, Houston; secretary, Dr. Richard T. Hamilton, Dallas; assistant secretary, N. F. Wallace, Fort Worth; and treasurer, Miss A. E. Hughes, Clarksville, and chairmen of sections, Dr. Benjamin R. Bluitt, Dallas, surgery; Dr. William T. Hughes, Fort Worth, practice of medicine; Dr. Felix A. Bryan, Dallas, gynecology; Dr. Rufus S. Childs, Houston, tuberculosis; Dr. Mary S. Moore, Galveston, obstetrics; Dr. William M. Drake, Marshall, pathology; Dr. Ransom B. Barnes, Cleburne, genitourinary diseases; Dr. Henry E. Lee, Beaumont, hygiene; H. M. Whitey, Houston, dentistry; and G. W. Lemons, Fort Worth, pharmacy. Austin was selected as next place of meeting.

VIRGINIA

Medical Faculty Meets.—At the annual meeting of the Petersburg Medical Faculty, November 19, the following officers were elected: President, Dr. Leverett S. Early; vice-presidents, Drs. W. Preston Hoy, and Hampden A. Burke; secretary-treasurer, Dr. William C. Powell; corresponding secretary, Dr. J. R. Beckwith, and court medical, Drs. Samuel A. Hinton, Franklin W. Hains, William H. Crockford, Jr., J. Bolling Jones, and Daniel D. Willcox.

Personal.—Dr. George K. Sims, Richmond, was operated on November 17, at the Memorial Hospital.——Dr. Truman A. Parker, Richmond, has been elected executive secretary of the Virginia Antituberculosis Society.——Dr. Charles R. Grandy, Norfolk, has been elected a vice-president of the Virginia State Antituberculosis Society, and Dr. Charles P. Wertenbaker, U. S. P. H. and M.-H. Service, Norfolk, a director.——Dr. John W. Winston, Norfolk, has been appointed captain and assistant surgeon, N. G. Va.

State Antituberculosis Association Organized.—The Virginia Antituberculosis Association was organized at Richmond, November 6. Dr. William F. Drewry, Petersburg, was temporary chairman, and Dr. Albert W. Freeman, Richmond, temporary secretary. The following permanent officers were elected: President, Capt. W. W. Baker, Hallsboro; vice-presidents, Governor-elect William Hodges Mann, Governor Claude A. Swanson, President Edwin A. Alderman of the University of Virginia; Dr. Elliott T. Brady, Abingdon; Right Rev. Augustin Van de Vyver, Bishop of Richmond; Dr. Rawley W. Martin, Lynchburg; Dr. Stephen Harnsberger, Catlett; John S. Bryan, Richmond; and Dr. Charles R. Grandy, Norfolk; secretary, Miss Ann Gulley, Richmond; treasurer, Thomas W. Scott, Richmond; and directors, Dr. Charles P. Wertenbaker, U. S. P. H. and M.-H. Service, Norfolk; John T. Maginnis, Radford; Dr. William F. Drewry, Petersburg; George W. Wright, Marion; Mrs. John W. Hayes, Petersburg; Rev. J. T. Mastin, Richmond; Mrs. D. W. Reade, Charlotte; Dr. Ennion G. Williams, Richmond; Dr. Ernest C. Levy, Richmond, and Miss S. H. Cabiniss, Richmond.

WASHINGTON

Local Physicians Elect.—At a meeting of the North End (Seattle) Medical Society, October 29, the following officers were elected: Dr. Walter K. Seelye, president; Dr. Clarence W. Knuedson, vice-president; and Dr. J. Tate Mason, secretary-treasurer.

Hospital Contract Awarded.—The general contract for the erection of the buildings for the Vancouver Branch of the Sisters of Charity of the House of Providence has been awarded to contractors in Vancouver for $111,000. The building is to have a frontage of 160 feet, with a width of 48 feet, a central wing projecting 72 by 35 feet. The building will be practically fireproof.

Personal.—Dr. Elmer M. Brown, Tacoma, has been commissioned colonel and assistant surgeon in the National Guard of Washington, and Dr. John S. Kulp, major, medical corps, U. S. Army, retired, has been commissioned lieutenant colonel and chief surgeon of the medical corps.——Dr. C. R. Duncan is reported to be critically ill with typhoid fever at the home of his sister in Cle Elum.——Dr. Joseph L. Lane, physician at the state penitentiary, Walla Walla, has resigned and will begin practice in Seattle.

WEST VIRGINIA

Free Antitoxin.—The State Board of Health, at its meeting in Parkersburg, November 10, decided to place antitoxin for the treatment of diphtheria in every county in the state for the benefit of those unable to purchase it.

Antituberculosis League Organized.—The Antituberculosis League of Moundsville was organized November 15, with V. A. Weaver, chairman, and A. R. Bennett, secretary. It was arranged to hold an antituberculosis exhibit during December. Drs. LeRoy S. Hennen, John C. McCollough, and Joseph A. Striebach were appointed a committee of arrangements.

Medical Society Meeting.—The Grant-Hampshire-Hardy-Mineral Counties Medical Society held its annual meeting in Burlington, October 22, and elected the following officers: President, Drs. James W. Shull, Romney; vice-presidents, Drs. William T. Highberger, Maysville, Robert W. Love, Moorefield, George H. Thomas, Romney, and Hugh Strachan, Blaine; secretary, Dr. W. Holmes Yeakley, Keyser; treasurer, Dr. Walter M. Babb, Keyser, and censors, Drs. Glenn Mooman, Petersburg, George H. Thomas, Romney, R. W. Love, Moorefield, and Lloyd L. Edgell, Keyser.

WISCONSIN

Marinette County Physicians Meet.—The annual meeting of the Marinette County Medical Society was held in Marinette, November 9, when the following officers were reelected: President, Dr. H. F. Schroeder; vice-president, Dr. Simon Bergland; and secretary-treasurer, Dr. Sherman E. Wright, all of Marinette. Dr. A. F. Lyon Campbell, Dunbar, was elected censor.

Personal.—Dr. L. Rock Sleyster, Appleton, has been appointed physician to the state penitentiary, Waupun, vice Dr. Moore, who has been appointed superintendent of the State School for the Blind, Janesville.——Dr. Mazyck P. Ravenel, Madison, has been reelected president, Dr. Hoyt E. Dearholt, Milwaukee, executive secretary, and Dr. Clarence A. Baer, Milwaukee, secretary of the Wisconsin Antituberculosis Society.——Dr. L. Ward Alger, the oldest practitioner of LaCrosse, announces that he will retire from practice and move to Everett, Wash.

Officers of Hospital for Chronic Insane Elected.—At the annual meeting of the trustees of the Milwaukee County Asylum for Chronic Insane, Wauwatosa, Dr. William F.

Beutler was elected superintendent and medical officer for the fifteenth consecutive term, and the following members of the honorary medical and surgical staff were reelected: Drs. Gustav A. Kletzsch, Uranus O. B. Wingate, A. Hamilton Levings, Ernest C. Grosskopf, Louis Fuldner, Christian H. Beyer, Franklin H. Hagerman and Gustavus I. Hogue, Milwaukee, and Drs. Ferdinand M. Scholz, Moses J. White, Richard Dewey, and Edward A. Schmitz, Wauwatosa.

CANADA

Personal.—Dr. Oscar Klotz, for seven years assistant in pathology to Prof. John G. Adami at McGill University, Montreal, has been appointed professor of pathology in the University of Pittsburg and will enter on his new duties about the New Year.——Dr. H. H. McIntosh has resigned from the superintendency of the Vancouver General Hospital and Dr. W. A. Whitelaw succeeds him.——Drs. George A. Kennedy, McLeod, Alta.; Thomas J. Costello, Calgary, Alta.; and Robert G. McDonald, Sarnia, Ont., have gone abroad.——Dr. George H. Parke, Quebec, has been appointed surgeon to the garrison at St. Johns, P. Q., vice Dr. Chevalier, resigned.——Dr. Hugh A. McColl, Milton, Ont., has returned from Europe.

Dominion Registration.—Dr. Thomas G. Roddick called a meeting of the committee of the Canadian Medical Association on Dominion Registration in Montreal, November 16. British Columbia, Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia and Prince Edward Island were represented and the following medical councils or provincial examining boards sent delegates to confer with this committee: Nova Scotia, New Brunswick, Quebec and Ontario. The meeting was called to consider the resolution practically unanimously passed at the annual meeting of the Canadian Medical Association held in Winnipeg in August, which provided that the Roddick Act be put in force whenever five or more provinces agreed to the provisions of the act. It is understood that the meeting was an entirely satisfactory one and that steps will be taken to have amendments made to the Canada Medical Act of 1902 at the present session of the federal parliament.

Tuberculosis.—The Royal Edward Institute for the care of patients suffering from tuberculosis in Belmont Park, Montreal, was opened by King Edward October 22. Addresses were made by Sir George Drummond, president of the institute; Sir Charles Fitzpatrick; Dr. R. W. Philip, Edinburgh, Scotland, and others.——The Lake Edward (Que.) Sanatorium for the care of patients suffering from tuberculosis was opened October 14. The institution has accommodation for about thirty patients and is intended only for incipient cases. Dr. William E. Ainley, Lachine, has been appointed medical superintendent. ——The buildings of the Ninet's Sanatorium, Brandon, are nearly completed and will be ready for occupation about Christmas.——A tuberculosis commission from New Brunswick, consisting of Drs. John R. McIntosh and A. F. McAvenney, St. John, Dr. Robert L. Botsford, Moncton, and Dr. Bourk of Kent county, has recently been in Boston on a tour of investigation and study of the tuberculosis problem in that city.

Hospital News.—At the annual meeting of the Montreal Maternity Hospital held recently, Dr. Andrew MacPhail was made a life governor. Owing to the unsatisfactory financial condition of the hospital, an appeal will be made to the public for better and larger financial support.——The Alexandra Hospital for contagious diseases, Montreal, recently appealed to the public for funds to wipe out its mortgage indebtedness of $100,000, of which amount $30,000 was received. The work in connection with this hospital is increasing very rapidly. During the first ten months of 1908, 367 patients were admitted, while for the corresponding period of 1909, 561 have been received.——Regina, Sask., is erecting a new hospital at a cost of $100,000, to be finished by December, 1910.——Calgary, Alta., is erecting a new hospital in which fraternal societies will furnish wards, while several private individuals will furnish rooms.——The Provincial Royal Jubilee Hospital, Victoria, B. C., is erecting a new Maternity Home.——A new hospital for the insane is being erected at Coquitlam, B. C. It will be called Mount Helmcken, after Dr. J. S. Helmcken, Victoria, dean of the medical profession of British Columbia.

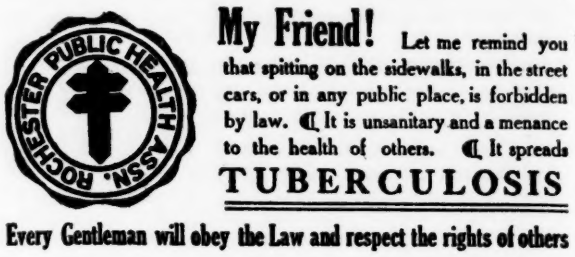
GENERAL NEWS AND COMMENT

Surgeons and Gynecologists to Meet.—The twenty-second annual session of the Southern Surgical and Gynecological Association will be held in Hot Springs, Va., December 14-16, under the presidency of Dr. Stuart McGuire, of Richmond, Va.

Interurban Officers.—Officers of the Interurban Academy of Medicine, whose membership includes physicians of Duluth, Minn., and Superior, Wis., were elected at the annual meeting held November 17, in Superior. Dr. Charles H. Mason, Superior, was elected president; Dr. Robert Graham, Duluth, vice-president; Dr. Thomas J. O'Leary, Superior, secretary-treasurer, and Dr. Edward L. Tuohy, Duluth, censor.

Mexican Medical Congress.—The fourth Mexican National Medical Congress is to be held in the City of Mexico, Sept. 19-25, 1910. The congress consists of physicians, druggists, veterinarians, dentists and sanitary engineers. The congress will award a prize of 1,000 pesos ($200) to the author of the address which may be declared the best, by a jury consisting of five individuals appointed by the president and vice-presidents of sections. The president of the congress is Dr. Porfirio Parra, and the secretary, Dr. Luis E. Ruiz, both of the City of Mexico.

To Discourage Spitting.—The Rochester (N. Y.) Public Health Association has printed quantities of a small yellow slip containing the accompanying statement, printed in red and black. These are for free distribution by policemen, street car men and others who are interested in the fight


ROCHESTER PUBLIC HEALTH ASSN.
My Friend! Let me remind you that spitting on the sidewalks, in the street cars, or in any public place, is forbidden by law. It is unsanitary and a menace to the health of others. It spreads
TUBERCULOSIS
Every Gentleman will obey the Law and respect the rights of others

against promiscuous spitting. It is hoped to suggest to offenders the necessity of proper observance of sanitary laws. This organization, whose address is 32 South Washington street, requests information, from others who have tried this method, as to the results observed.

Tri-State Societies Meet.—The Tri-State Medical Association of Mississippi, Arkansas and Tennessee held its twenty-sixth annual convention in Memphis, November 16-18, under the presidency of Dr. William H. Deaderick, Marianna, Ark. The following officers were elected: President, Dr. James S. Rawlins, Danceyville, Tenn.; vice-presidents, for Mississippi, Dr. William L. Howard, Greenville; for Arkansas, Dr. John L. Jones, Searcy, and for Tennessee, Dr. Nicholas S. Walker, Dyersburg; secretary, Dr. J. H. Eugene Rosamond, Memphis (reelected); and treasurer, Dr. James A. Vaughan, Memphis (reelected). The association will hold its 1910 meeting in Memphis.——The Tri-State Medical Association of Arkansas, Louisiana and Texas held its annual session in connection with that of the Northwest Texas Medical Society at Marshall, November 16 and 17. The following officers were elected: President, Dr. Robert H. T. Mann, Texarkana, Ark.; vice-presidents, for Louisiana, Dr. Mathias M. Collins, Hosston, and for Texas, Dr. John O. McReynolds, Dallas; secretary, Dr. Jacob M. Bodenheimer, Shreveport, La.; and councilors, Drs. Holman Taylor, Marshall, Texas; Joseph E. Knighton, Shreveport; and Frederick W. Youmans, Lewisville, Ark. Shreveport was selected as the next place of meeting.

American Scientists to Meet.—The sixty-first annual meeting of the American Association for the Advancement of Science, and the eighth of the convocation week meetings, will be held in Boston, December 27 to January 1, on the invitation of Harvard University and the Massachusetts Institute of Technology, under the presidency of Dr. David Starr Jordan, president of Leland Stanford, Jr., University, Cal. The following societies have indicated their intention of meeting in Boston during convocation week: American Society of Naturalists, American Mathematical Society, Association of American Geographers, Geological Society of America, Association of Economic Entomologists, American Nature-Study Society, Association of American Anatomists, American Chemical Society, American Society of Vertebrate Paleontologists, American Society of Zoologists, American Physical Society, American Psychological Association, American Physiological Society, American Anthropological Association, Entomological Society of America, American Folk-Lore Society, American Federation of Teachers of the Mathematical and the Natural Sciences, American Society of Biological Chemists, Sullivant Moss Society, Botanical Society of America, Society of American Bacteriologists, Association of Mathematical Teachers in New England, Eastern Association of Physics Teachers, Physics Teachers of Washington, D. C., American Phytopathological Society, American Alpine Club, and American Breeders' Association.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, Nov. 11, 1909.

Quacks on Trial

In the last few weeks two suits against quacks in Germany have attracted general attention. The first suit was for fraud against a spiritualist who had swindled the complainant out of $24,000 (100,000 marks), and who was sentenced to several months' imprisonment.

Still greater interest will be felt in a prosecution of the so-called clay pastor (*Lehmpastor*) Felke. In the Rhine country, a preacher named Felke for some years treated patients with water, air, light and earth, particularly with clay for local baths and poultices. He claimed to diagnose all possible diseases at the first look by certain changes, especially discoloration, of the iris. The fineness of this diagnosis is so remarkable that the pastor, as he stated at the trial, could tell whether any one ate much butter on his bread, whether the grandfather of the patient had had the itch, whether one had eaten an egg, and much more of the same kind. Thousands, among them well-to-do people from the better circles of society, consulted him.

One day he overlooked an appendicitis in a young man of 18 and by improper treatment caused his death. On trial for manslaughter by criminal carelessness, the court at Cleve acquitted him; the state's attorney appealed and the highest court in Germany, the imperial court, reversed the verdict and ordered a new trial in the county court at Krefeld. The height of excitement was reached when an opportunity was given the pastor, at the motion of the defense, and naturally with the support of the unprejudiced medical experts, among which were the renowned Professor Garré of Bonn, to exercise his eye diagnosis on twenty patients of the Krefeld city hospital. Not a single diagnosis was correct. Serious diseases were not recognized and symptoms were diagnosed which were not present. Even the fact that one patient was blind in one eye escaped the pastor.

The court decided that Felke had made a false diagnosis in the case involved in the trial and by prescription of improper measures had caused the death of the patient. In regard to carelessness, the court said the eye diagnosis was not reliable. However, inasmuch as the apparent successes of the treatment established by Felke and the respect of his patients extending almost to idolatry had confirmed him in the belief that he had the capacity of diagnosing disease correctly, the court gave an acquittal!

The state's attorney will appeal and there is no doubt that the imperial court will again reverse the decision. The imperial court has repeatedly expressed the view that quacks are responsible for their mistakes and liable to punishment in the same way as physicians. This is most distinctly stated in an opinion given in 1900, saying: "It is clear that an experience which dispenses with all scientific tests and basis for the connection between treatment and results has only the value of a guess and must always reckon with the danger of error and of mistakes and their consequences and that for this only the judgment of ordinary human intelligence is necessary. Whoever disregards this neglects his own capacity for thought and whoever undertakes the medical treatment of patients without having obtained the necessary scientific education is acting with a disregard of the attention necessary for such an employment which it is his duty to give it, i. e., is acting carelessly. Whoever exercises the healing of disease as a trade must acquaint himself with the rules of this science and must follow them if he is to escape the accusation of criminal carelessness against the life and health of another. And if he does not do this he is responsible for his offenses and their consequences."

On this principle the quack pastor will probably be convicted at the next trial. It is even more certain that, in spite of this, fools will still persist in their foolishness and quacks still find their supporters.

The Cholera

The cholera cases in East Prussia have not yet entirely disappeared. From the middle of July to the end of October, 33 cases have occurred, with 12 deaths. The government has instituted stringent measures requiring inspection of corpses by physicians, warning against the use of river water, supervising marine and river traffics (as without doubt the invasion of cholera from Russia occurs by water), installing steam disinfection apparatus at all quarantine stations and at the two cholera hospitals, and enforcing medical examination and baths for emigrants and immigrants and disinfection of their linen and clothing. The Russian raftsmen are returned to the border in closed cars.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Nov. 11, 1909.

Adulteration of Foodstuffs

The report on the budget of the Department of Agriculture gives an extensive review of the functioning of the service for the repression of fraud. During the year 1908, there were 67,726 samples of foods and drinks seized, out of which 14.4 per cent. were regarded as suspicious. Except in the Department of the Seine and some places where there were special agents, the seizures were made without discrimination. Sometimes the seizures are made on suspicion, and more frequently at random by way of control. In 1907 almost 20 per cent. of the samples seized were reported to the courts. In 1908 this average was lowered to 14.4 per cent., then to 14.1 per cent. in the first semester of 1909. The improvement was much more important in the provinces, where the average of suspicious samples was lowered from 18.3 to 10.4 per cent., but in Paris the average has risen from 23.7 per cent. to 31.6 per cent. At the period when the service for the repression of fraud began to act, the most frequently adulterated products were oil, milk, vinegar and wine. One of the most extensive frauds of recent years has been practiced in regard to mineral waters, both in the concerns which supply the groceries and in many of the most fashionable restaurants in Paris. The seizures of mineral waters began only at the end of the year 1907. The first case dates from Dec. 17, 1907, when a restaurant put ordinary water on sale in bottles bearing the trade-mark of a well-known mineral spring. In the course of 1908, numerous frauds in mineral water were brought to light in various restaurants which sold ordinary Paris drinking-water under the names of various mineral waters. From seizures made at groceries the service for the repression of fraud ascertained that the trade-marks of certain mineral waters have been tampered with. A strict surveillance was then placed over the wholesale dealers and at two wholesale establishments complete outfits for the manufacture of a mineral water were found. From October 22 to December 21 45,888 bottles of fraudulent water were sent out from the factory. In another factory the agents of the service for the repression of frauds found workmen occupied in filling bottles with "mineral water" that they were drawing from iron casks. The amount of ordinary water consumed by this concern, as registered on the meter, was, in 1907, 331,219 gallons (1,254,000 liters), and in 1908, 447,436 gallons (1,694,000 liters). The culprit confessed that he had made with ordinary water and bicarbonate of soda over 650,000 bottles of counterfeit mineral water.

Comparative Sanitary Conditions of the Troops at Paris and at Berlin

Last June, Dr. Lowenthal read before the *Académie de médecine* a paper on the comparative sanitary condition of the French and German armies from 1902 to 1906, from which it appeared that the general mortality in the French army was much larger than in the German army (THE JOURNAL, July 10, 1909, liii, 126). On November 9, Lowenthal placed the conclusion of his work before the academy, showing the mortality and morbidity of the garrisons of Paris and Berlin. This comparison is still more unfavorable. The general mortality of the army of Berlin is 10.5 per cent. lower than that of Paris. The morbidity from scarlatina in the army at Berlin is 25 per cent. lower and the mortality is 150 per cent. lower than that at Paris. In five years the number of measles patients in the Paris garrison is twice as numerous as in the whole German army; the number of deaths is seven times as large. The troops at Paris, if as numerous as the troops at Berlin (the garrison of Paris is composed of only 45,000 men against 65,700 men at Berlin) would furnish as many deaths from typhoid fever as the whole German army. The sanitary condition of the forces at Paris is deplorable not only as compared to that of the forces at Berlin, but even when compared with that of the army of the interior. Out of twenty corps of which the army of the interior is composed, the troops at Paris occupy the eighteenth place in the ascending scale of mortality and morbidity. The insalubrity of Paris, which increases each year because of the continual upheavals of the soil, is the primary cause of the unsatisfactory health of the troops, but another cause is the deplorable condition of the barracks, of which the greater number in Paris date from the 16th and 17th centuries, and meet the demands of modern hygiene hardly better than the cannons and guns of those periods satisfy the demands of modern warfare.

Mutual Benefit Societies and Social Hygiene

The *Alliance d'hygiène sociale* has taken advantage of the congress of the *Fédération nationale de la mutualité* which is now in session at Paris to draw the attention of the mutual benefit societies to the part which, even in their own interests, they ought to take in promoting social hygiene. M. Léon Bourgeois, former cabinet minister and president of the alliance, undertook to show the members that such societies would be acting wisely in their own interests if they employed part of their reserve funds (at present amounting to about 150,000,000 francs or $30,000,000) in the preservation of public health. In aiding the construction of cheap dwellings, for example, the mutual benefit societies would make a particularly advantageous investment, for they would then hinder one of the principal causes of long illnesses, particularly tuberculosis, the victims of which are such a heavy burden on the treasuries of the benefit societies. It was unanimously decided to form a permanent social hygiene commission of the mutual benefit societies, which will try to obtain from legislators and public authorities the right to use part of the reserve funds of the mutual aid societies in works of social hygiene, as has been done in Germany, where the insurance societies participate with so much success in the strife against tuberculosis. A particularly urgent feature is organization of insurance for chronic partial invalids, who, for lack of continued care, end by becoming permanent charges on the mutual benefit societies or on the public charities (*Assistance Publique*). The combat against unhealthful dwellings should also have an important place in the activities of the benefit societies, the improvement of the dwellings resulting in the decrease of the mortality from tuberculosis. If this double task cannot be accomplished by local societies, it is not beyond the powers of the department federations.

Election of Dr. Wurtz to the Académie de médecine

In its session of November 9, the *Académie de médecine* elected Dr. Wurtz an honorary member in the Section of Hygiene, Legal Medicine and Sanitary Police in place of Dr. Motet, who died last March. Dr. Wurtz, son of a celebrated chemist, is about 50 years old. He was a pupil of the late Professor Strauss, and when very young became successively professor *agrégé* at the Paris medical school and physician of the hospitals. He is known especially for his works on colonial pathology which he studied in the colonies, especially in Africa. One of the last missions that he accomplished was in Abyssinia, where for two years he was called on to attend the Emperor Menelik and his suite.

An Apostle of Repopulation

A few days ago Senator Piot died in his eighty-first year. He was one of those who first raised the cry of alarm in regard to the slow progressive depopulation of France. From his entry to the senate in 1897, M. Piot cooperated with the efforts of the statistician, Dr. Bertillon, against the decrease of the birth-rate in our country compared with the increase in other nations. He wrote many pamphlets and published two books, "Enquiry Into the Depopulation of France" (1899) and "Depopulation" (1903). All the acts of his political life were toward a single end, an effort against depopulation. To this end he proposed a bill for a special tax on bachelors and childless citizens; he obtained the creation of an extraparliamentary commission for the study of depopulation, the work of which unfortunately was interrupted by the lack of provision for its expenses. M. Piot also carried on an energetic campaign in favor of large families, which made him one of the most prominent political characters and won him the title of the "apostle of repopulation."

First Congress of Public Health Officers

A few days ago the first congress of sanitary physicians was held at the Pasteur Institute. It was due to the initiative of the Society of Public Medicine and Sanitary Engineering and was composed of public physicians and officers charged with the administration of the law of 1902 in regard to the protection of public health. Two of the questions discussed were of particular importance, namely, that of the reporting of infectious diseases, and that of the rôle of the departmental hygienic inspection. The congress resolved that the reporting of infectious diseases should be obligatory jointly on the head of the family and on the physician; also that the reporting of measles should be compulsory, disinfection being optional, and done at the demand of the family or of the physician. Dr. J. Courmont, professor of hygiene at the Lyons medical school, argued that the optional departmental service of hygienic instruction ought to be made compulsory for each department. The inspector ought to be a doctor of medicine and selected by competitive examination. His function should be to direct the service of disinfection and vaccination, to keep the sanitary records of the communes, to inspect unhealthful occupations, etc. The congress approved these conclusions. At the close of the congress a special commission met immediately to study the best means to bring about the necessary close relations between public physicians, sanitary officers and practicing physicians. The following are the conclusions of this commission:

1. It is important to improve the relations between practicing physicians and sanitary officers. The latter ought to furnish free when practicing physicians request it, everything necessary for isolation and disinfection.

2. Practitioners should have at their service laboratories where they can obtain free for their poor patients bacteriologic diagnoses in suspect cases. As moreover there are paying cases in which a practitioner may need bacteriologic diagnoses, but does not desire to inform the family, and as the service rendered is a public one, in such cases bacteriologic diagnoses should be furnished free to the practitioner.

3. Sanitary officials should try to reach an understanding with the physician of a case and to cooperate with him.

4. The practitioner in charge of the case should be invited to communicate his diagnosis as soon as possible and to point out suspected cases which are sometimes the most interesting from point of view of prophylaxis.

Congress of Sanitation and Salubrity of Dwellings

The third national congress of sanitation and salubrity of dwellings which has just been held at Paris, of which I mentioned the program in a previous letter (THE JOURNAL, Oct. 16, 1909, liii, 1304) also took up modifications to be made in the law of 1902 in regard to public health. It especially asked resolutions to the effect that the declaration for the disinfection of buildings in cases of contagious diseases ought to fall on the head of the family; it also resolved that a bill be brought forward authorizing expropriation on account of insalubrity, the expenses of expropriation to fall on the expropriated owner.

Prosecution for Delayed Report of a Case of Typhoid Fever

Dr. Forquin, a physician in Mirecourt (Vosges) was recently condemned to a fine of $10 (50 francs) for infringing the law in regard to the reporting of epidemic diseases. He had been called on April 5 to see a patient whose case he reported on April 27 as typhoid fever. He was prosecuted for his delay. He pleaded that his diagnosis had not been certain until the night of the 26th, and that consequently he was not able to make a report earlier. The court of Nancy, to which appeal was taken, reversed the decision of the lower court and acquitted Dr. Forquin.

The Ultra-Microscope and the Cinematograph

Much interest has recently been shown in a communication by Dr. Comandon to the *Académie des Sciences* in regard to the application of the cinematograph to the dark field microscope. According to Dr. Doyen cinematographic images of microscopic objects were made in London in 1906 by a distinguished naturalist, Mr. Marc Duncan.

International Conference Against Saccharin

On November 15, the international conference for the repression of the use of saccharin opened in Paris. Professor Bordas was elected president. The governments represented were those of France, Germany, Austria, Belgium, Greece, Hungary, Italy, The Netherlands, Portugal, Russia and Switzerland. The first session was devoted primarily to the examination of existing legislation for the repression of the sale and use of saccharin and similar sweetening substances.

Courses on Care of Infants

Dr. Maygrier, head accoucheur at the Maternité, has just inaugurated at the Fondation Pierre Budin (THE JOURNAL, June 19, 1909, lii, 2006) courses in "puericulture" from the earliest ages. This course will be completed in ten lessons and there will be several series during the school year.

Death of Professor Mayet

Dr. Octave Félix Mayet, former professor of general pathology at Lyons medical school, former physician of the hospitals of the same city, has just died, aged 74. He was the author of a treatise on medical diagnosis and semeiology in two volumes, published in 1897.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, Nov. 20, 1909.

Short Sight in the Upper Classes

In delivering his presidential address to the Illuminating Engineering Society, Prof. Sylvanus Thompson, the eminent physicist declared that there was a greater percentage of short sight among the upper classes than among the poor. His explanation is that the illumination of the schools and colleges in which the children of the former class study, is defective and thus that in using their eyes the children are actually forced into short-sightedness. He reviewed the science of illumination from the days of rush-lights and candles to the present era of electric light and incandescent mantles, and he made a strong plea for an international unit of light. The present unit of so many candle power is vague and indefinite. It is now possible by the photometer to define the measurement of light. Why, therefore, should it not be employed for the measurement of light? There was no reason why schools and other public buildings should not be properly illuminated on a scientific basis. The factory acts contained no regulation except that the building should be "adequately lighted." What did adequate lighting mean? The health authorities had not a single photometer to ascertain whether buildings were adequately lighted or not. The only country in Europe which had sensible regulations on the point was the little kingdom of Holland.

Disease and Crime

The doctrine of the late Professor Lombroso that crime is due to an abnormal physical constitution of the criminal has not obtained much support in this country. The following extracts from the prison commissioners' report for England and Wales, 1909, shows, however, that mental and physical disease bear some relation to crime: "The number of convicted prisoners certified insane during the previous year was 97 men and 38 women, most of whom showed signs of insanity when admitted. There were 259 others listed as feeble-minded. At least 3 per cent. of the inmates of prisons are obviously mentally defective." In 1898 careful observations made of all youths detained in Pentonville (a large London prison) between the ages of 16 and 21 showed a deficiency of both height and weight. Their average height was two inches less than that of the general population and their weight average was fourteen pounds less. No fewer than 26 per cent. of them were afflicted with some disease, deformity, or disablement.

The Queen Alexandra Sanatorium at Davos

A new sanatorium for consumptives has been built under the patronage of the queen at Davos, the well-known Swiss resort for sufferers from that disease. It is to accommodate British patients who cannot pay for the charges of a private sanatorium. As the wooden structures used for sanatoria in England would not be suited for the climate of Switzerland, in which it is necessary to build in solid masonry, alike for durability and safe and efficient heating, the new sanatorium has been built of stone with concrete floors, roof, staircases, and balconies. The walls of the foundations, cellars, and basements are of immense thickness and the main walls are nowhere less than two feet. The building is close to Davotz Platz on the mountain side, about 300 feet above the town of Davos. The pine forest stretches almost to the doors, and affords a variety of sheltered walks. At present 54 patients can be accommodated, but the public rooms, kitchens, etc., have been constructed for the requirements of 120 and the building can be enlarged to furnish additional bedrooms. A new feature of the construction is that each patient will have a separate room divided from the others by a stone wall. As is always necessary in the high Alps, the outside doors and windows are double, but ample ventilation has been provided. The lodgment of dust is guarded against by the rounding off of all corners and angles. The resident staff consists of a medical superintendent, a junior medical officer, a matron, and two trained nurses, all of whom are British.

Compulsory Operations and Workmen's Compensation

As shown in previous letters the Workmen's Compensation Act, which renders employers liable for every accident which may befall a workman in the course of his employment, has caused considerable litigation. One point raised was whether a workman suffering from some disability is entitled to continue to receive a pension if the disability can be removed by an operation to which he refuses to submit. The point was first raised in 1903, when the court decided that no workman could be compelled to undergo an operation. In 1908 the point was again raised in another case when the court decided that the workman ought to have submitted to the operation and that his incapacity arose, not from the original injury, but from his unreasonable refusal to undergo operation involving only a slight risk. About the same time a similar case came before the Court of Appeal in Scotland, in which country the laws differ in many respects from those of England. In this case three out of five physicians recommended the amputation of a workman's second finger, which was crooked as the result of injury and interfered with his work. The court decided that his refusal to undergo operation destroyed his right to any further compensation, because like any reasonable person who wished to be restored to health, he should submit to an operation attended with little risk. A decision in a somewhat similar case has now been given by the English court of appeal in favor of the workman. This man was engaged on board a ship where he met with a serious accident which caused a double rupture. As he was suffering from disease of the kidneys his family physician advised him not to undergo an operation, though this was recommended in hospital. The judge in giving judgment said that the case was most important. The question was whether the man unreasonably declined operation. He could not admit that the man acted unreasonably under the circumstances in following his physician's advice. The judge in the lower court had decided to the contrary on the balance of the medical evidence before him as to whether the operation was reasonably safe or not. But that was not the real question; the point was whether the man had acted unreasonably in refusing to undergo the operation. After the evidence of his own physician his lordship thought that no amount of other medical evidence was relevant. He therefore allowed the appeal. The importance of this judgment is great, for it lays down the principle on which must be decided in future as to what is "unreasonable refusal" to undergo an operation.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, Nov. 15, 1909.

Proposed Tax on Alcohol and Mineral Waters

The increased demand for funds for defensive purposes has prompted the minister of finance to suggest, among other taxes, taxes on medicinal waters and alcohol, which would materially hamper the treatment of disease. The tax on alcohol used in the composition of drugs, formerly only about 8 cents per liter or 4 cents per pint is expected to be not less than 20 cents. Pharmacists are already trying to produce remedies free from alcohol. The substitution of glycerin for alcohol has been shown to be possible in a good many prescriptions, so that the result of the increased tax would hardly meet the expectations of the government. Even more marked is public dissatisfaction with the proposed tax on mineral waters. In many places the ordinary water is not always quite reliable; therefore the natural sparkling waters are consumed in this country in enormous quantities; and medicinal waters are an absolute necessity with many persons. The tax would be a heavy burden as, although only 1 or 2 cents are to be levied per bottle, this runs up into high figures when the annual consumption is considered. Therefore, not only medical men, but also the *Curorte*—the health resorts which bottle such waters— have remonstrated. Not only the waters mentioned but all aerated waters, including the common "soda-water" are to be taxed. In one of the numerous mass-meetings to protest against such taxes, one of the speakers, a medical man, hit the nail on the head, saying that it was a wrong policy, if the state wanted to become stronger, to prevent the sick from regaining their health. This tax, together with the constantly rising prices for cereals and meat, is sure to bring down the national health from the comparatively high level it had reached a short time ago. Already some classes of the population have to reduce their annual consumption of meat, as the prices are getting exorbitantly high; on the other side, butter, fat and bread are also much dearer so that in the memorandum addressed to the government, medical bodies have pointed out these points too, which speak against the above-mentioned taxes being made lawful.

Medical Inspection of School Children

In a large number of cities an attempt has been made to ascertain through the public health officers the percentage of healthy and unhealthy children frequenting the public schools

within a certain time; the results and conclusions are interesting. Altogether, about 250.000 children have been examined in the months of May, July, October and November (the end and commencement of our school year). Eyes, ears, nose, throat, teeth, condition of joints and bones as well as general health are chiefly examined; the ages of the children were from 6 to 14 years. Only 22 per cent. had normal teeth; those between the ages of 6 and 9, 13 and 14 were especially affected. The eyes were found myopic in only 10.5 per cent., hypermetropic in 3 per cent.; the percentage of both abnormal conditions was fairly constant at all ages, which is rather unexpected as regards the younger children at least. Tonsils were enlarged in 30 per cent., adenoids were present in 20 per cent.; both conditions in about 19 per cent. It could not be ascertained exactly in how many cases removal had been effected previously to examination. A fairly large percentage had chronic rhinitis, without adenoids. In 27 per cent. the nose was not normal, and deviations of the septum seemed to become more frequent in the older children. Affections of the ear were noted in 32 per cent.; mostly a simple catarrh of the tube and the tympanic cavity, while otorrhea was present in about 30 per cent. of the ear patients, that is to say, in about 11 per cent. of all children. Measles, scarlet fever and diphtheria were most often the cause. After-effects of rickets were noted in 20 per cent.; in another 5 per cent. the history allowed the assumption of the disease having been present. Disease of the joints was seen only in 3.5 per cent., mostly in the knee, then in the talocrural joint, then in the fingers (spina ventosa), then in the hip. Only 20 per cent. of all children could be classified as perfectly healthy; in the majority there were combinations of ear and nose and throat, or teeth and throat diseases. Disturbances in the function of the eye and ear were observed in 5 per cent.; of more than two important organs in only 2 per cent. Altogether the national physique would be supposed to be at a very low standard were it not proved that the majority of children outgrow their diseases, except the irreparable conditions of eye, ear and joints.

Pharmacology

THE UNITED STATES PHARMACOPEIA

The Report of the Committee of the American Pharmaceutical Association

It is important that physicians and pharmacists should become acquainted with the views of members of both of these professions in regard to the revision of the Pharmacopeia. We therefore review this committee's report (published in the *Am. Pharm. Assn. Bull.*, November, 1908, iv, 395), as one of the most important contributions from the pharmaceutical side. In regard to the scope and policy of the Pharmacopeia we quote the words of the report:

"The real and immediate interests of physicians and retail druggists should not be overshadowed by those of the large manufacturers, importers, food officials and others, who desire the Pharmacopeia to be almost a universal standard for chemicals. It is to the best interests of the members of this association that the U. S. P. continue to be what its founders intended it, viz., a medium of communication between the prescribing physician and the dispensing pharmacist. It should not be made a standard for drugs which the retail pharmacist is not called on to dispense except in so far as the quality of the preparations which he does dispense is directly dependent on the quality of the crude drugs. It should not be a standard for articles, the chief uses of which are those of foods, beverages, or flavoring agents. . . . It is to the interest of this association that the Pharmacopeia be made to meet as nearly as possible the present-day needs of the medical profession. Hence we believe that full cognizance should be taken of the fact that the science of medicine is international and that every effort should be made to make the U. S. P. correspond as closely as practicable in strength of preparations, nomenclature, etc., to international usage."

If the views just quoted are followed there can be no possible ground of conflict between the medical and pharmaceutical professions over the revision of the Pharmacopeia. Physicians will probably feel disposed (and with good reason) to leave the question of botanical names to the discretion of others; also to a certain extent, chemical names except in so far as physicians demand that those which are to be generally employed shall be the least cumbersome that are consistent with scientific terminology.

A troublesome question is that of names of mixtures. It is evident that potent drugs should not be dispensed under names which favor forgetting their character. The committee states that only the hypercritical will object to the name of "compound mixture of glycyrrhiza," though that mixture contains a small amount of opium. The name sets a bad example at least; if there is enough opium in the mixture to produce its effect it should be indicated in the name; if the amount is too small to produce any effect it should be omitted from the preparation.

While the question of additions and dismissals from the Pharmacopeia rests primarily on the judgment of physicians, pharmacists are in a position to form an estimate of the attitude of the medical profession as a whole toward specific drugs; hence the committee presents lists of articles to be dismissed or added, and promises more complete lists at a later date. Pharmacists can also aid in determining which of certain commercial varieties of drugs are obtainable and which are not.

The committee takes up the question of increasing the number of assays of organic drugs; Lyons advises against this. It must be apparent to every physician that the time has come when we must introduce physiologic standardization for at least a few drugs, such as ergot, digitalis and strophanthus and their preparations, which are unsuited for chemical assay. Some pharmacists will urge the objection to this that only the larger manufacturing firms are in a position to standardize drugs physiologically and that this measure would compel the pharmacist to depend on these manufacturers. This argument should not be permitted to stand in the way of real progress.

A suggestion which will probably meet much favor at the hands of physicians, who should really have the larger share in deciding the point, is that all tinctures shall be made of uniform percentage strength.

If physicians will manifest as much interest in the forthcoming revision as the pharmacists are doing, and if the various problems concerned in revision be considered broadly, we should have a Pharmacopeia in which pharmacists and physicians may feel a just pride—a work which will command confidence and general respect and which will come to be regarded by all really progressive physicians as the storehouse from which to select agents for their prescriptions. Then shall we see the beginning of the end of the reign of the nostrum evil and the rise of legitimate pharmacy and therapeutics. It remains to be seen how far the selfish interests of certain manufacturers will be permitted to thwart this much-to-be-desired result.

Correspondence

Industrial Section of Congress on Hygiene

To the Editor:—Section IV of the International Congress on Hygiene and Demography, meeting in Washington, Oct. 1, 1910, will deal with industrial and occupational hygiene. This is an almost entirely unexplored field in our country and the coming congress offers for the first time an opportunity for a full discussion of the diseases incident to industry in the United States and the measures of prevention which should be advocated. Many papers dealing with conditions in Europe and England have been promised, and it is hoped that conditions in this country will also be thoroughly discussed. Physicians whose private or hospital practice lies among people of the wage-earning class are reminded that very little original work has been done by Americans in industrial diseases and that statistical studies of the morbidity rate in the different trades would be of great value. Communications regarding such papers should be sent to 1819 Q street, Washington, D. C.

GEORGE M. KOBER, President.
ALICE HAMILTON, Secretary.

Dr. Jacobi Refuses to Endorse Promoter of Unethical Advertising

To the Editor:—I request you to publish this protest of mine against an attempt on the part of William Edward Fitch, M.D., the new editor of *Pediatrics* to use my name as that of a renegade from decent professional behavior. In the first number controlled by him, he places, without my permission or consent, my name at the head of his "Editorial Council," whatever that may mean. His introductory chapter on "Advertising in *Pediatrics*" sneers at those who look on "all advertising as venal muck" that would soil their "pharisaical fingers," and whom he calls "pharisaical pariahs," etc., and invites the "liberal patronage of legitimate advertisers." The editor might have known that I approve of purity and ethics in the medical profession, as represented in such of its magazines as are not mercenary or meretricious, and of its aversion to the advertising of nostrums. I shall thank you for publishing the following copy of a letter I sent to Dr. Fitch, November 19:

> I never read your first number until my attention was called to it by a western correspondent. In using my name as a member of your "Editorial Council" you made a mistake and committed a wrong. I never gave you permission; you never asked for it. In shaping your policy, I am sure you never consulted anybody who cares for the editorial standing and progress of the profession. That policy of yours may be successful from a financial point of view, which I doubt, however; for what you gain in advertisers, you will lose in readers and friends. It is an abomination. Please remove my name from the place it now occupies and have the goodness to tell your readers of your mistake. Yours truly,
>
> A. JACOBI.

November 22, I received the following reply:

> *Dr. Abraham Jacobi, New York City.*
>
> *Dear Doctor:* In reference to our telephone conversation of a few moments ago as stated, I now advise that I interpreted your letter in reply to my letter of September 15, to mean that you were willing to become a collaborator to the new *Pediatrics*. It seems that I have misunderstood the purport of your letter for which I am exceedingly sorry, since you would be the last gentleman in the world that we would care to offend, and we beg to assure you, dear doctor, that no offense, discourtesy, or anything of the kind was intended, and it will be our pleasure in our next issue (December) to make the necessary explanation and remove your name from the place it now occupies.
>
> Regretting the occurrence and imploring your forgiveness the writer begs to remain,
>
> Most sincerely and respectfully yours,
>
> W. E. Fitch, M.D.,
> Editor of *Pediatrics*.

I am sorry to say that the courteous tone of this letter does not improve Dr. Fitch's position as a promoter of unethical advertising, nor that of his magazine as a worthy part of medical literature.

A. JACOBI, New York.

COMMENT:—In the October issue of *Pediatrics* (the first under the new management) it is stated editorially that:

> "No advertisements will appear in the advertising section of *Pediatrics* exploiting any pharmaceutical product, the manufacturers or proprietors of which do not freely and accurately give the exact character and ingredients entering into or forming its component parts."

In the same issue is to be found an advertisement of "enteronol," the nostrum which was exposed in THE JOURNAL Nov. 20, 1909. The Enteronol Company, it will be remembered, claims that it does not pay cash for advertising space but takes it "in trade"—either in "our guaranteed 7 per cent. preferred stock" or in enteronol itself. As to how accurately the "exact character and ingredients entering into" enteronol, are given by its manufacturers see the exposure in THE JOURNAL. Another editorial statement regarding the advertising standards of *Pediatrics* is:

> "Any advertisement containing dangerous or toxic ingredients will be refused."

This probably means that *products* "containing dangerous or toxic ingredients," etc., will not be advertised. Danger and toxicity are relative terms, but if used absolutely, then it would seem that *Pediatrics* will refuse to advertise most of the valuable drugs in the pharmacopeia; if used relatively then it would seem in order for that publication to drop the advertisement of what Mr. Adams calls "that hoary and dangerous fake, antikamnia," which is sent to the laity direct and which contains a heart depressant both dangerous and toxic.

> "Advertisements presenting extravagant or impossible statements will be refused."

On advertising page xv of the same issue of *Pediatrics* which contains the above excellent sentiments, occurs this statement:

> "ENTERONOL, THE GREATEST GASTRO-ENTERIC ANTISEPTIC AND GERMICIDE KNOWN TO MEDICAL SCIENCE."

If this is the editor's idea of a non-extravagant and not-impossible statement then his "rules and regulations to which all advertising must conform" will not offer insuperable barriers to the acceptance of peruna, Duffy's malt whisky or any "patent medicine" frauds.

The editor of *Pediatrics* says: "We hold that the advertising pages of every scientific publication is [are?] entitled to a 'square deal.'" It is respectfully suggested that the medical profession and the public are also entitled to a "square deal," and when the frauds and humbugs of the proprietary world are exploited in the pages of a medical publication the medical profession and the public are not getting it.

We do not blame Dr. Jacobi for his evident indignation. It would be interesting to know how many more physicians' names have been thus misused.

Miscellany

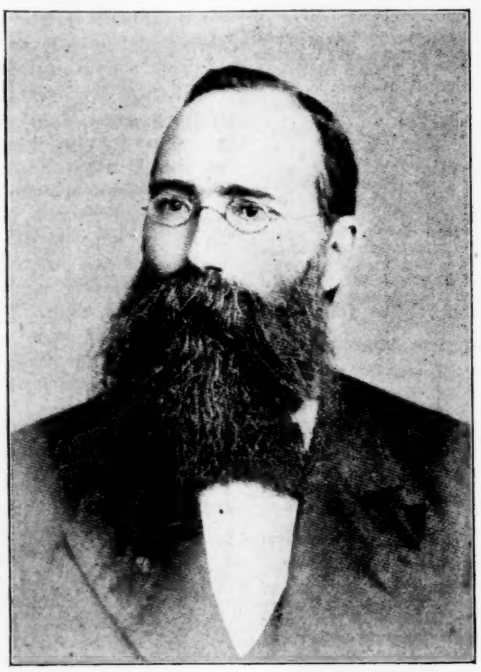
The Quack and the Laity.—Maynard A. Austin (*Indianapolis Medical Journal*, October, 1909) holds that the practitioner of medicine alone is to blame for any lack of standing he may have in his community. This neglect of psychologic principles, he believes, has been the cause of the great success of the religio-medical movements. Considering the personality of the average quack, he must be credited with exhibiting a good front on all occasions and always making occasions for putting up the front. He is egotistic and in his egotism believes himself capable of much that is beyond his ability. Patients are impressed with this sort of thing, and against their own judgment will place themselves in the hands of such men. An interesting fact is the ease with which fees are secured by quacks in advance, while the home doctor waits six months to five years, and feels lucky if he gets his pay then. If a patient pays out a hundred dollars to be cured of some malady, that hundred dollars is going to be a wonderful inducement for that patient to carry out every instruction that is given to him. If he sees his family doctor once a week, and pays him a dollar or two (or has it charged on the books) the patient is little or nothing out, and with the average patient with a chronic affection, the amount of assistance he gives in helping himself get well is a negligible quantity. To do away with all these things Austin regards as an impossibility. So long as people live and suffer, the reputable physician will have to contend with impostors and charlatans. To do away with the worst features of quackery is a matter of education, not condemnation. Few physicians, to say nothing of the laity, know of the various schemes the "patent-medicine" concerns are working to gain the confidence of, and much valuable information from, the women of various cities. Under the pretext of giving health lectures, hygienic demonstrations and physical culture training, a number of women are employed who go out in the various cities with letters of introduction and a good front, approach a few of the prominent club women and get in touch with the church people through the ministers and ministers' wives. One of the peculiar facts of the business is the ease with which the churches are secured for the furtherance of these affairs, and occasionally it has leaked out that the minister has been the recipient of a percentage. This is not to be wondered at in the light that the religious papers have been among the worst offenders in the class of advertising they carried. One church paper, recently inspected by Austin, carried thirteen advertisements offering cures for such conditions as cancer, consumption, fits, rheumatism and other chronic conditions for which no certain cure has ever been discovered. These conditions are brought about not only by the superstition of the laity, but also by their refusal to believe—when told them by their physicians—that some conditions have no certain cure, that others are incurable and that others need nothing but mental treatment because they are purely imaginary. Austin says that even the reputable profession could be given a house-cleaning with great benefit, moral, professional and financial, to the good of the profession itself and the physical and financial welfare of the laity.

Deaths

William Biddle Atkinson, M.D., a member of the American Medical Association since 1859 and its permanent secretary from 1864 to 1899; died at his home in Philadelphia, November 23, aged 77. He was born in Delaware county, Pa., received his preliminary education in Philadelphia, and commenced the study of medicine in 1850 under the preceptorship of Dr. Samuel McClellan, one of the founders of Jefferson Medical College and the Pennsylvania Medical College, Philadelphia; after a three-years' term of study he was graduated from the Jefferson Medical College in 1853. For several years thereafter, in addition to the practice of medicine, he taught mathematics and the classics at Gregory's Classical School.

In 1854 he became a member of the Philadelphia County Society; was its secretary for seven years; a reporter of its proceedings for medical journals, vice-president of the society, and in 1873 its president. He was permanent secretary of the Medical Society of the State of Pennsylvania from 1862 to 1897; secretary and later president of the Northern Medical Association of Philadelphia, and in 1894 was elected president of the State Associated Health Authorities of Pennsylvania.

For several years Dr. Atkinson acted as correspondent of the *New Jersey Medical and Surgical Reporter*, *New York Medical Times*, *Nashville Medical Journal*, *New Orleans Medical Journal* and others; in 1858 he became associate editor of the *New York Medical and Surgical Reporter*, and a year later was appointed editor of the department of obstetrics and diseases of women and children in the *North American Medico-Chirurgical Review*. His literary work also included the editing of the annual volume of transactions of the American Medical Association; the publication of several annual editions of the Philadelphia Medical Directory, a biography of physicians and surgeons of the United States, and many valuable monographs on obstetrics and gynecology.



WILLIAM BIDDLE ATKINSON, M.D.

He commenced his medical teaching as assistant professor of obstetrics and diseases of women and children in the Pennsylvania Medical College in 1859, retaining this position for two years until the college became defunct, and at this time he conducted the only gynecological clinic in the city; from 1877 to 1886, he was lecturer on diseases of children in Jefferson Medical College, and in 1887 was made professor of sanitary science and pediatrics in the Medico-Chirurgical College.

During the Civil War he served as acting assistant surgeon in the army for two years, and from the creation of the State Board of Health in Pennsylvania in 1886, was medical inspector. In 1861 he was made physician to the department of diseases of children, and president of the staff of Howard Hospital, Philadelphia, and held this position for several years. The American Medical Association owes much to Dr. Atkinson, who, during the years of relative weakness of the organization, served faithfully as its secretary, sparing neither time nor strength for the furtherance of its best interests and its upbuilding.

Frank Bradford Sprague, M.D. University of Vermont, Burlington, 1889; a member of the American Medical Association, New York Academy of Medicine, American Otological Association, American Laryngological, Rhinological and Otological Society; and American Academy of Ophthalmology and Otolaryngology; surgeon to the ear, nose and throat department of Rhode Island Hospital, Providence; and aural surgeon on that staff; well-known as a specialist of diseases of the ear; died at his home in Providence, November 17, from septicemia, due to an operation wound, aged 44.

Frank Merriam Johnson, M.D. Albany (N. Y.) Medical College, 1898; a member of the Medical Society of the State of New York; and health officer of East Nassau, N. Y.; died at his home in that place, November 8, from the effects of a gunshot wound of the thorax, self-inflicted, it is believed, with suicidal intent, while ill and despondent, aged 40.

William J. Purkhiser, M.D. Kentucky School of Medicine, Louisville, 1882; a member of the Indiana State Medical Association, and secretary of the Third Councilor District Medical Society; in 1888 and 1889, senior assistant in the Central Indiana Hospital for the Insane, Indianapolis; local surgeon for the Monon System at Salem, Ind.; died in his office in that place, November 15, from the effects of a gunshot wound of the head, self-inflicted, it is believed, with suicidal intent, while despondent on account of ill health, aged 48.

William H. Finley, M.D. Medical College of Ohio, Cincinnati, 1858; assistant surgeon of the Twelfth Iowa Volunteer Infantry and surgeon of the Eighth Iowa Volunteer Cavalry during the Civil War; a member of the local pension board; coroner and commissioner of Dubuque county, Iowa, and a member of the common council of Cascade; died at his home, November 13, from senile debility, aged 78.

John H. Britts, M.D. Missouri Medical College, St. Louis, 1867; a member of the American Medical Association; surgeon in the Confederate Service during the Civil War; once mayor of Clinton, Mo., and state senator; died at his home in Clinton, November 13, aged 74.

Charles Henry Ott, M.D. Jefferson Medical College, Philadelphia, 1883; a member of the American Medical Association; superintendent and surgeon-in-chief to the Robert Packer Hospital, Sayre, Pa.; local surgeon to the Lehigh Valley Railroad; supreme medical examiner of the Modern Protective Association; died in the Robert Packer Hospital, November 1, from carcinoma of the liver, aged 48.

David Herrick Beckwith, M.D. Eclectic Medical Institute, Cincinnati, 1849; emeritus professor of sanitary science in the Cleveland Homeopathic Medical College; formerly president of the city and state boards of health; consulting physician to the Huron Street Hospital, Cleveland; vice-president of the Cleveland Medical Library Association; died at his home, November 19, aged 84.

Quincy Orlin Sutherland, M.D. Hahnemann Medical College, Chicago, 1873; a member of the Wisconsin State Board of Health, American Public Health Association, and Lake Michigan Sanitary Commission; at one time president of the board of education of Janesville, Wis.; died suddenly at his home, November 16, from angina pectoris, aged 61.

James William Stuart, M.D. Medical School of Maine, Brunswick, 1873; a member of the Maine Medical Association; formerly president of the Oxford County Medical Association; died at his home in Rumford Corner, November 10, from embolism, aged 65.

John Pierre Frishmuth, M.D. University of Pennsylvania, Philadelphia, 1890; of Philadelphia; a member of the American Medical Association; a specialist on diseases of the stomach, and formerly visiting physician to the American Hospital for Diseases of the Stomach; died in the University of Pennsylvania Hospital, Philadelphia, November 20, after two operations for tumor of the brain, aged 41.

Burr K. Ellis, M.D. University of Minnesota, Minneapolis, 1903; formerly of Jackson and Sparta, Minn.; and later of Greeley, Colo.; a member of the Colorado State Medical Society; died in Rock Valley, Iowa, November 4, from tuberculosis, aged 32.

Clifton Mayfield, M.D. George Washington University, Washington, D. C., 1880; a member of the American Medical Association; formerly of Washington, D. C.; died at his home in Canarsie, Long Island, N. Y., November 15, from heart disease, aged 51.

John Patrick Henry, M.D. New York University, New York City, 1886; a member of the American Medical Association, Physicians' Alliance, and Celtic Medical Society; died at his home in New York City, August 31, from neuritis, aged 50.

John Parker Powell, a pioneer practitioner of Oregon; for more than fifty years in practice in Gresham; for many years coroner of Multnomah county; died at his home in Gresham, October 30, from angina pectoris, aged 87.

John H. Seegraves, formerly of Rector, Ark.; assistant surgeon of volunteers during the Civil War; died at the home of his daughter in Mayfield, Ky., October 21, from malaria and acute articular rheumatism, aged 69.

John S. Cornwell, for more than sixty years a practitioner of Carthage, Tenn.; a surgeon in the Confederate Service during the Civil War; died at his home in Watertown, Tenn., July 28, from senile debility, aged 93.

Charles LeGrand Hayes, M.D. Vanderbilt University, Nashville, Tenn., 1877; a member of the Mississippi State Medical Association; died at his home in Byhalia, November 16, from cerebral hemorrhage, aged 50.

R. Augustus Evans, M.D. Western University, London, Ont., 1905; councilor for the town of Sutherland, Sask.; died in the General Hospital, Saskatoon, Sask., November 2, from chronic interstitial nephritis, aged 29.

Jay Judson Thompson, M.D. Chicago Homeopathic Medical College, 1888; professor of surgery in Hering Medical College, Chicago; died at his home in that city, November 22, from cerebral hemorrhage, aged 52.

Nathaniel Williams, M.D. University of Pennsylvania, Philadelphia, 1868; a surgeon in the Confederate Service during the Civil War; died at his home in Hampton, Va., November 18, from heart disease, aged 66.

William J. Chittenden (license, Ill., 1877; license, Colo., 1894); a veteran of the Civil War; died at the home of his daughter near Neodesha, Kan., May 15, from gastrointestinal catarrh, aged 68.

A. L. Holliday (license, Marshall county, Ala.); for more than thirty years a practitioner of Albertville, Ala.; died at the home of his son in Fairview, Birmingham, Ala., November 16, aged 75.

Cortez Nelson, M.D. Long Island College Hospital, Brooklyn, N. Y., 1908; a surgeon on South American steamers; died in Bellevue Hospital, New York City, November 1, from tropical fever, aged 45.

John Washington Shell (license, Iowa, 1895); for more than forty years a practitioner of Iowa; died at his home near Decatur, March 16, from cerebral hemorrhage, aged 85.

Rawdon J. Arnold, M.D. Kansas City (Mo.) Hospital Medical College, 1883; (license, Cal., 1877); of Oakland, Cal.; died in the Alameda County Hospital in April.

John M. Cooper, M.D. Medical College of Ohio, Cincinnati, 1857; of Wellsburg, W. Va.; died at the home of his daughter in Charleston, W. Va., November 17, aged 77.

John Thomas Fleming, M.D. Baltimore (Md.) Medical College, 1904; died at his home in Pascoag, R. I., November 11, from heart disease, aged 35.

Samuel Martin Kelso, M.D. Jefferson Medical College, Philadelphia, 1868; died at his home in Xenia, Ohio, October 17, from heart diease, aged 71.

Rodney F. Crowther, M.D. Baltimore (Md.) Medical College, 1883; died at his home in Earleigh Heights, Md., July 27, from senile debility, aged 84.

Dennis J. McLaughlin, M.D. University of Pennsylvania, Philadelphia, 1880; died at his home in Philadelphia, November 11, aged 52.

Lebbeus Curtis, M.D. Dartmouth Medical School, Hanover, N. H., 1878; died at his home in Hephzibah, Ga., November 16, aged 63.

Nathaniel C. Whitfield, M.D. Hahnemann Medical College, Chicago, 1883; died at his home in Los Angeles, November 7, aged 66.

Marriages

ELISHA FLAGG, M.D., to Mrs. Hugh Whitney, both of Boston, November 17.

WILLIAM A. DORSEY, M.D., Seattle, Wash., to Miss Blanche Pentz, at Seattle, November 12.

CARROLL LEJA NICHOLS, M.D., to Miss Hazel Louisa Howe, both of Brooklyn, N. Y., November 2.

ROBERT L. MITCHELL, M.D., Baltimore, Md., to Miss Annie Inskip Smith, of Elkton, Md., November 17.

EDWIN DIXON CARDER, M.D., to Miss Barbara Fraser Maclennan, both of Vancouver, B. C., October 12.

RICHARD HENRY LAWLOR, M.D., Methuen, Mass., to Miss Catherine V. Murphy, of Boston, November 18.

JOHN WILSON SOMERVILLE, M.D., Norfolk, Va., to Mrs. Louise Gay Stubbs, of Atlanta, Ga., November 17.

KARL FRANCIS LITTLE, M.D., Westwood, Cincinnati, to Miss Dona Tebbs, of West Harrison, Ohio, November 17.

PATRICK WILLIAM O'BRIEN, M.D., Toronto, Ont., to Miss Helena Margaret Graves, at London, Ont., October 26.

HERMAN LOUIS KRETSCHMER, M.D., to Miss Lucy North Barnett, both of Chicago, at Richmond, Ind., November 17.

EUGENE BOYKIN ELDER, M.D., to Miss Margaret Selena Borthwick, both of Macon, Ga., at Toronto, Ont., September 18.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

RUHEMANN'S URICOMETER

To the Editor:—Please answer the following questions regarding the workings of Dr. F. Ruhemann's uricometer. The normal marking on the scale is said to be 0.65; suppose that the reaction is not complete until the instrument is filled to the top, 0.25; then subtracting 0.25 from 0.65 we have 0.40. I take it that 0.40 means so much less than the urine should contain, but I would like to have you show how, with 0.40 to start with one can figure out the amount of uric acid the person is passing in 1,500 c.c. of urine. Kindly take some marking which shows that too much uric acid is being passed and work out the problem of telling the amount of uric acid in 1,500 c.c. of urine. J. L. TRACY, Toledo, Ohio.

ANSWER.—The principle of Ruhemann's uricometer is that uric acid will absorb iodin. A definite amount of iodin is placed in the instrument in a solution composed of iodin, 1.5; potassium iodid, 1.5; alcohol, 15; water, 185.0. In the very bottom of the instrument is a quantity of carbon disulphid. The carbon disulphid dissolves the iodin with a brown color. The urine is added gradually with shaking after each addition. When all the iodin has been absorbed by the uric acid in the urine, the carbon disulphid will be colorless (one must stop with a faint pink color). The less the proportion of uric acid in the urine, the more urine must be added to decolorize the iodin solution. Consequently the scale is arranged with markings for cubic centimeters on one side and amount of uric acid per thousand of urine on the other. The percentage of uric acid necessarily decreases with the increased amount of urine, so that the scale for amounts of uric acid reads from above downward. If 7.2 c.c. of urine must be added, a percentage of uric acid corresponding to 0.25 per thousand would be indicated. If the patient is passing 1,500 c.c. of urine this would amount to 0.375 gm. of uric acid. Suppose that it required the addition of only 4 c.c. of urine, the corresponding figure in uric acid would be 0.8 per thousand and the amount for 1,500 c.c. would be 1.2 gm. A normal marking on the scale is only an estimate, as what is normal in one case might be abnormal in another and this figure has nothing to do with the calculation except that if 0.65 is marked as the normal, we would calculate from that for 1,500 c.c. the normal quantity of uric acid as 0.975 gm.

The Public Service

Medical Department of the Army

Changes for the week ended Nov. 27, 1909:

Stark, Alexander N., major, granted an extension of 15 days to his leave of absence.

Duncan, William A., capt., granted sick leave of absence for 3 months.

Manly, Clarence J., major, granted leave of absence for 7 days.

Roberts, William M., major, promoted from captain November 17, vice Ewing, retired.

Glennan, James D., and Rafferty, Ogden, majors, ordered to report at Washington, December 17, for examination for promotion.

McAndrew, Patrick H., capt., ordered to report at Washington, D. C., for examination for promotion.

Jordan, Edward H., and Davis, Oscar F., 1st lieuts., M. R. C., relieved from duty in Philippines Division; will sail for San Francisco, Cal., February 15.

Browne, Rhodric W., 1st lieut., M. R. C., ordered from Fort Monroe, Va., to Fort Niagara, N. Y., for temporary duty.

Eliot, Henry W., 1st lieut., M. R. C., granted an extension of 1 month to his leave of absence.

Henning, Oswald F., 1st lieut., M. R. C., ordered to active duty; will proceed to San Francisco, and sail January 5, for Philippine service.

Wells, Francis M., 1st lieut., M. R. C., relieved from duty at Fort Robinson, Neb., and ordered to Fort Apache, Ariz., for duty.

Medical Corps of the Navy

Changes for the week ended Nov. 27, 1909:

Brownell, C. D., surgeon, detached from the *Mississippi* and granted sick leave for 6 weeks.

Clifford, A. B., P. A. surgeon, detached from the Naval Hospital, Las Animas, Colo., and ordered to the *Albany*.

Public Health and Marine-Hospital Service

List of Changes for the seven days ended Nov. 24, 1909:

Irwin, Fairfax, surgeon, relieved from duty on U. S. Revenue Cutter *Thetis*, effective Nov. 22, 1909, and granted 1 month's leave of absence.

Parker, Herman B., P. A. surgeon, relieved from duty at Ellis Island, N. Y., and directed to Guayaquil, Ecuador, for duty in the office of the U. S. Consul.

Anderson, John F., P. A. surgeon, directed to proceed to Mexico City, on special temporary duty.

White, M. J., P. A. surgeon, directed to proceed to Flint, Mich., on special temporary duty.

Lloyd, Bolivar J., P. A. surgeon, on the arrival of Passed Assistant Surgeon Herman B. Parker, directed to proceed to New York, and report by wire to the bureau for further orders.

Lloyd, Bolivar J., P. A. surgeon, granted 1 month's leave of absence en route to United States.

Spratt, R. D., P. A. surgeon, leave of absence for 20 days from Nov. 17, 1909, amended to read from December 10.

Lyon, R. H., asst.-surgeon, granted 7 days' leave of absence from Nov. 14, 1909, under paragraph 191, Service Regulations.

Duke, B. F., acting asst.-surgeon, granted 25 days' leave of absence from Nov. 18, 1909.

Castro-Guitierrez, J. L., acting asst.-surgeon, granted 7 days' leave of absence from Nov. 18, 1909.

Hallett, E. B., acting asst.-surgeon, granted 3 days' leave of absence from Nov. 24, 1909.

Naulty, C. W., Jr., acting asst.-surgeon, granted 5 days' leave of absence from Nov. 24, 1909.

Schuster, B. L., acting asst.-surgeon, granted 3 days' leave of absence from Nov. 25, 1909.

Sinclair, A. N., acting asst.-surgeon, granted 15 days' leave of absence from Dec. 16, 1909.

Ward, J. LaBruce, acting asst.-surgeon, granted 10 days' leave of absence from Nov. 17, 1909.

Wilson, J. G., acting asst.-surgeon, granted 25 days' leave of absence from Dec. 2, 1909.

BOARD CONVENED

Board of medical officers convened to meet at the Marine Hospital, Baltimore, Nov. 29, 1909, for the purpose of conducting a physical examination of four cadets and three cadet-engineers of the U. S. Revenue Cutter Service. Detail for the board: Surgeon W. P. McIntosh, chairman; Passed Assistant Surgeon M. K. Gwyn, recorder.

Health Reports

The following have been reported to the Public Health Service, during the week ended Nov. 26, 1909:

SMALLPOX—UNITED STATES

Alabama: Montgomery, Nov. 6-13, 15 cases.
California: San Francisco, Oct. 30-Nov. 6, 1 case.
Illinois: Chicago, Nov. 6-13, 1 case.
Indiana: Muncie, Nov. 6-13, 2 cases.
Kansas: Kansas City, Nov. 6-13, 1 case.
Louisiana: New Orleans, Nov. 6-13, 2 cases, imported.
New York: Buffalo, Nov. 6-13, 1 case.
West Virginia: Wheeling, Oct. 30-Nov. 6, 1 case.

SMALLPOX—FOREIGN

China: Shanghai, Sept. 25-Oct. 2, 1 case, 1 death.
Ecuador: Guayaquil, Oct. 1-15, 1 case.
India: Bombay, Oct. 5-12, 1 death.
Italy: Naples, Oct. 23-30, 3 cases, 1 death.
Mexico: Monterey, Oct. 24-31, 1 death; Veracruz, Oct. 23-30, 2 deaths.
Russia: Odessa, Oct. 10-17, 4 deaths; Warsaw, Sept. 11-18, 6 deaths.
Spain: Barcelona, Oct. 18-25, 1 death.
Turkey: Constantinople, Oct. 17-24, 1 death.

YELLOW FEVER

Ecuador: Guayaquil, Oct. 1-15, 13 cases, 4 deaths.
Mexico: Merida, Oct. 30-Nov. 6, 1 case, 1 death.

CHOLERA

Germany: Allenstein district, Oct. 23-30, 1 case; Andreischken, 6 cases; Heydekrug district, 6 cases; Labiau, 3 cases; Skirwietell, 5 cases; Skopen, 3 cases.
India: Calcutta, Oct. 2-9, 11 deaths.
Siberia: Vladivostok, Oct. 4-16, 20 cases, 1 death.

PLAGUE

Ecuador: Guayaquil, Oct. 1-15, 56 cases, 16 deaths.
India, general, Oct. 2-9, 5,209 cases, 4,123 deaths; Calcutta, 5 deaths.
Venezuela: Caracas, Nov. 11, 2 cases, 2 deaths.
Zanzibar, Nov. 8, 1 case, 1 death.

Association News

HOTELS FOR ST. LOUIS SESSION

First Announcement Concerning Hotels—Wisdom of Securing Accommodations Early

The Subcommittee on Hotels, of the Committee on Arrangements for the next annual session of the American Medical Association, to be held in St. Louis, June 7-10, 1910, announces arrangements for hotels.

The Southern Hotel, selected as General Headquarters, is in the down-town district, in the center of the hotel district, and about fifteen minutes' car ride from the various section meeting places. Other hotels of the same rank in the down-town district are the Planters, the American, the Maryland, the Jefferson, and the Marquette. Other excellent hostelries down town are the St. James, the Laclede, the Madison, the Terminal, the Moser, the Strattford, and the Bozier, all of which have splendid accommodations.

In the other direction, and in the so-called residence area, are a number of first-class hotels. The Buckingham, the Buckingham Annex, the Washington, and the Hamilton are from ten to fifteen minutes' ride distant, while the Beers and the West End are in the immediate locality of the section meeting halls. All the hotels mentioned have from 200 to 400 rooms.

Mr. Lyman Hay, president of the Hotel Managers' Association has notified the committee that the regular rates will prevail, and has expressed the earnest desire of the hotel men to have all well satisfied.

The Coliseum, at which will be the Registration Bureau, the Scientific Exhibit, and the Commercial Exhibit, is half way from the down-town district to the group of Section meeting places.

As the crowds which attend a session of the American Medical Association usually tax the hotel capacity of the city in which the session is held, the committee is preparing a list of other and smaller hotels, as well as a splendid list of boarding houses and private homes, in order to care for the overflow.

Many reservations are already made and the hotels are prepared for all applications. The Committee on Hotels requests early application to these hotels from any who are particular about their accommodations. For example, a group from one community may desire adjoining reservations; two or more persons may desire rooms *en suite*, with bath adjoining, one may have a preference for some particular hotel. These and other arrangements are possible now, but may be difficult or impossible to obtain later, when all the best rooms and even all available accommodations in some hotels will be engaged.

Applications should be sent direct to the hotel and the hotel management will make the arrangements desired, but the Committee on Hotels will gladly render aid at any time, to have all satisfactorily located. Dr. Louis H. Behrens, Chairman of the Committee on Hotels, may be addressed at Times Bldg., St. Louis.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Newspapers Interested in Public Instruction

One of the most gratifying indications of awakening interest in the enlightenment of the public on medical and sanitary questions is the interest shown by some of our leading newspapers on this subject. Reference has previously been made in these columns to the New Orleans *Item* (THE JOUR-

NAL, July 31, 1909, liii, 399). In its issue of November 10, the *Item* says editorially, in part, in discussing the duty of the doctor as a public teacher:

"The medical man either takes it for granted that the world knows that he knows or he fears that a little knowledge placed in the hands of the multitude will prove a dangerous thing. He overlooks the great agencies for the spread of correct information among the people; he operates as an individual or in his local society or hospital and forgets that he is forgotten in turn by the world at large until he is called to attend a case of sickness. In many cases he is called when it is already too late to effect a cure. Every physician who is earnest and capable and who cherishes the ideals of the splendid profession which he practices, knows that medicine is still in its infancy. . . . He feels that the day will come when society will employ the scientific physician as it now employs its public school-teachers, its governors and mayors, its legislators, its judges, and its police force. He knows that just as science has improved on the breeding of apples and oranges, of wheat and corn and sugar-cane, of horses and cattle and other animals, it will improve on the breeding and education of human beings. . . . We need an institute which will send out lecturers to spread a knowledge of hygiene among the children in the schools and among residents in the villages and country districts . . . that will collect and utilize every agency for the spread of a correct knowledge of preventable diseases. . . . The physician no more belongs to himself or to his class than does the preacher of the gospel, the teacher in the school, the publisher of a newspaper, the judge in the courts, or the advocate at the bar. As a professional man, it is his duty to serve humanity, to ask or demand the cooperation of other workers for the eliminations of wrong and the advancement of right in the service of humanity."

Equally gratifying is an editorial in the St. Louis *Republic* for November 17, called forth by letters to the editor from several antivaccinationists who advanced the stock arguments and time-worn statistics which have so often done duty on this subject. The *Republic* prints these letters in its correspondence columns and comments as follows editorially: "To defend vaccination gives a modern newspaper a queer sort of feeling. It is like defending the theory of the circulation of the blood or arguing with Rip Van Winkle, but it is still necessary, as two letters printed elsewhere on this page attest." The *Republic* then discussed the letters in question in a way that cannot fail to be enlightening and convincing to its readers.

The value of such comments lies in the fact that, coming from a layman and not a medical man, there can be in them no suspicion of personal interest such as is often injected into such discussions. When a newspaper like the St. Louis *Republic*, of its own initiative, defends and champions the cause of scientific medicine so convincingly and satisfactorily, it is certainly safe to assume that general public opinion is equally ready to support and to further sanitary reforms whenever the people are properly instructed.

Hogs Versus Children

The *Bulletin of the Iowa State Board of Health* recently contained the following item which graphically sets forth the apparent relative importance of children and hogs if one is to judge from the government appropriations made for their safety:

"Congress has been asked this year for an appropriation of $3,000 for the employment of an expert in the welfare of children. It was hoped by those who made the request that this modest beginning would lead to an efficient bureau of the Department of the Interior which would eventually deal with a wide range of questions affecting school children.

"In support of this request a Nebraska woman wrote that her husband was engaged in raising hogs while she was trying to raise a boy. Her husband, she said, had no difficulty in getting efficient and expensive aid from the government in his hog-raising pursuits, but she had to struggle along in her own way with the boy question. With a pardonable mother's prejudice, she argued that the welfare of her boy seemed almost as important as the health and happiness of her husband's hogs."

POSTGRADUATE COURSE FOR COUNTY SOCIETIES

DR. JOHN H. BLACKBURN, DIRECTOR
BOWLING GREEN, KENTUCKY

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Fourth Month—Second Weekly Meeting

CHRONIC ENDOCERVICITIS

PATHOLOGY: 1. Erosion of cervical epithelium, (a) simple, (b) papillary or granular erosion. 2. Glandular enlargement, (a) polypoid (mucous polypi), (b) cystic (follicular) glandular enlargement.

DIAGNOSIS AND PROGNOSIS.

TREATMENT: Indications for local treatment, for repair of laceration, for amputation of cervix.

CHRONIC ENDOMETRITIS

CLASSIFICATION: A. Histological: 1. Glandular, (a) hypertrophic, (b) hyperplastic. 2. Interstitial. 3. Glandular and interstitial. Cystic and polypoid endometritis. B. Clinical: 1. Post-abortum. 2. Exfoliative. 3. Senile. 4. Bacterial (tubercular, gonorrheal, typhoid, etc.). 5. Decidual.

SYMPTOMS: Menstrual disturbances, hemorrhages, discharge, abortions or sterility, pain, vesical and rectal disturbances, systemic and reflex disorders.

TREATMENT: Systemic, local, surgical.

CHRONIC METRITIS

PATHOLOGY: Chronic changes in endometrium; in peritoneum; in muscularis, 1. hypertrophic, (a) puerperal (subinvolution), (b) nonpuerperal (elongation of cervix); 2. interstitial, cirrhotic, metritis (puerperal and non-puerperal atrophy).

SYMPTOMS AND DIAGNOSIS.

PELVIC INFLAMMATION

Includes metritis, lymphangitis, phlebitis, cellulitis, salpingitis, ovaritis and pelvic peritonitis.

ROUTES OF INFECTION: Extension by (a) continuity of uterine and tubal mucosa, (b) through lymph and blood vessels, (c) extension from extrapelvic organs, appendicitis, tubercular peritonitis, etc.

ETIOLOGY: Secondary to endometritis, traumatisms of parturition and surgery, vaginal, vesical, intestinal and peritoneal infections, acute infectious diseases. Micro-organisms present, relation of different organisms to extent and character of pathology.

Society Proceedings

COMING MEETINGS

American Physiological Society, Washington, D. C., December 28-30.
Medical Society of State of New York, Albany, January 25.
Southern Surg. & Gynecological Assn., Hot Springs, Va., Dec. 20-21.
Western Surgical and Gynecological Assn., Omaha, December 20-21.

CITY OF WASHINGTON BRANCH OF THE AMERICAN PHARMACEUTICAL ASSOCIATION

Meeting held November 3, 1909

DR. H. W. WILEY, Chief of the Bureau of Chemistry, in the Chair

Patent and Trade-Mark Laws

The audience included pharmacists, physicians, manufacturers and representatives of at least several government services, including the Patent Office and the Bureau of Chemistry.

DR. MURRAY GALT MOTTER, Washington, discussed the report of the Committee on Patents and Trade-Marks of the American Medical Association (THE JOURNAL A. M. A., June 19, 1909, p. 2063), and pointed out that this report presented the several questions in a clear and concise manner.

DR. F. E. STEWART, Philadelphia, a member of the Committee on Patents and Trade-Marks of the American Pharmaceutical Association, discussed the report of his committee.

MR. SAMUEL L. HILTON, Chairman of the Committee on National and State Legislation of the American Pharmaceut-

ical Association, reported on the hearings on the Mann bill and outlined the history of that bill. He pointed out the shortcomings of that particular measure and the possibility of overcoming them by modifications.

MR. WILLARD S. RICHARDSON, Chairman of the Committee on National Legislation of the N. A. R. D. reported on the hearings that have been held on the Currier bill. He said in part: The purpose of this bill was to bring about a more equitable exchange of patent rights between this country and foreign countries. At present, a citizen of a foreign country receives more protection by a patent in this country than is given in a foreign country to an American citizen. This humiliating condition is generally unknown to the majority of American citizens. The only objection that has ever been urged against the reciprocal principle of the Currier bill is that the adoption of this principle would be in opposition to Article 2 of the International Agreement of 1883. Since that agreement, a number of foreign countries have introduced serious and unjust restrictions, to the detriment of American citizens. At the Brussels Conference, in 1887, our delegates endeavored to secure a modification of Article 2. While we lost in our contention no criticism was ever attempted on the stand taken by us. President Roosevelt, in his message in 1903, said: In granting patents to foreigners, the proper course for this country to follow is to give the same advantages to foreigners that the country in which these foreigners live extends in return to our citizens. Even the attorneys who have been opposing any change in the present patent laws have not denied the justice of the principle embodied in the Currier bill, and all their efforts have been centered on delaying action of any kind by prolonging the hearings and begging for delay on the ground that the matter should not be gone over hastily.

DR. WORTH HALE, of the Public Health and Marine-Hospital Service, pointed out that, in speaking of the misuse of drugs as fostered by our patent and trade-mark laws, one should disregard personal and financial considerations, since the whole question rests ultimately on such factors as will bring the greatest degree of health to those who suffer from disease. The patient's right and his protection are first to be considered; the interest of manufacturers, of physicians and of pharmacists are but secondary and are to be considered only after the welfare of the general public has been safeguarded. In whatever degree patent and trade-mark laws have lessened this protection they are to be criticized adversely.

Because of laws giving to manufacturers exclusive rights to names and products, the pharmacies of every city and village in the United States are filled with inferior, useless and harmful medicinal substances, and pharmacies frequently have in stock, because of special nomenclature, five, ten, possibly twenty, duplications of the same chemical substance or pharmaceutical mixture. A well-known instance of this abuse is evidenced by hexamethylenamin, the duplication of which has become a necessity in order to meet the demand of the physician who orders it under a trade name, because he is ignorant of its true composition.

We must remember, however, that the abuses which exist have not developed because of the existence of patent and trade-mark laws, but because of the advantages taken of the privileges accorded by them. It must be admitted that patent and trade-mark laws permit of the establishment of monopolies, a monopoly fosters unusual profits, unusual profit permits of extensive advertising, extensive advertising increases the sale, and consequently the use or abuse, thus making the financial returns from the protected product both certain and large. It is unfortunate, indeed, that in no other field are extravagant misleading and unverified claims so difficult to correct or control as in connection with medicinal products, whether advertised to the medical profession or to the laity; whether the remedy be peruna or purgen, dysmenorrhets or desiccated castor oil, its successful sale depends far more on the advertising claims made for it than on absolute or comparative value over older preparations. The advertising pages of even the better class of medical journals are filled with statements that are designed to mislead, are always exaggerated, and not infrequently positively untrue. Just a few instances taken at random:

"Syrup Roborans, as a nerve stimulant and restorative in wasting and debilitating diseases, as a constructive agent in insomnia, pneumonia, tuberculosis, bronchial asthma, marasmus, strumous diseases and general debility this compound has no equal."

"Tongaline, successfully prescribed for twenty-five years. Rheumatism, neuralgia, sciatica, lumbago, malaria, grippe, colds, gout, excess of uric acid. Relieves pain, allays fever, eliminates poison, stimulates recuperation."

"Verily it hath become too easy to live."

The shame of it is that such statements are believed and that they are believed is evidenced by the fact that they must bring returns or they would not be made. No arraignment of modern advertising methods and of the physician who has been influenced by them can be too severe, for the commercial spirit thus generated has robbed medicine of its best heritage, a materia medica based on scientific principles, and has left in its place, at least with the physicians affected, a materia medica of monopolized preparations prescribed by "Docs" educated by detail men and the "patent-medicine" literature of the manufacturer.

PROF. JOHN URI LLOYD, Cincinnati, pointed out that he necessarily differed from many of his friends on some of the questions that had been under discussion, and asserted that we must individually live up to what we consider to be right and just. He discussed the application and the possible uses of copyrights, trade-marks and patents and expressed himself as being opposed to the granting of product patents because this practice tends to prevent the development of science and is therefore unfair and unjust. He controverted some of the arguments that had been used in connection with the opposition to the Mann bill, and expressed himself as being hopeful of the enactment of more equitable patent laws in the near future. He also expressed himself as having an abiding faith in the pharmacy of the future and in the development of the sciences of pharmacognosy and pharmacology. He also has hope in the materia medica of the future, and expects to witness the elimination of heroic drugs from which so many people at the present time do not escape.

DR. H. W. WILEY pointed out some of the abuses that had been exposed by the work of the Council on Pharmacy and Chemistry of the American Medical Association, and asserted that the duplication of names for the same, or practically the same, substance constitutes an abuse of far-reaching influence. He pointed out that medical men are gradually recognizing the fallacy of expecting to secure what might be termed mass effect by the use of complex mixtures, and that the trend at the present time is to prescribe simple medicaments for the purpose of securing definite effects.

MR. M. I. WILBERT pointed out that the reference made by Professor Lloyd to the use of "heroic drugs from which so many of our people do not escape," was particularly applicable to the widespread use, or more correctly, abuse of the so-called synthetic preparations. He expressed himself as fearful that when the history of the tar barrel was finally written, as it eventually will be, the harm done by these remedies, the lives that have been materially shortened and the constitutions that have been undermined, will far outweigh any real good that has been evidenced up to the present time.

MR. WYMOND H. BRADBURY called attention to some of the petty frauds that have been developed in connection with patents on medicinal products and referred at some length to the practice of the American agents for some of the products on which patents have expired, who, as is well known, are asking a much higher price for phenacetin, sulphonal and trional, as such, than for the corresponding substances sold by them under the official titles, though there is no detectable difference in the quality of the article, and there is every reason to believe that the agents themselves import these substances under their official titles and pay the minimum import duty.

The continued proprietorship in the name of a patented article, after the expiration of the patent, was further discussed by Dr. Stewart, Dr. Seaman and Mr. Hilton, the latter expressing the belief that the quibble over the property right in the name of a patented medicinal article had never arisen until in connection with phenacetin, sulphonal and trional.

Book Notices

NAVAL HYGIENE. By James Duncan Gatewood, M.D., Instructor in Naval Hygiene, United States Naval Medical School, Washington. Cloth. Pp. 779, with 113 illustrations, 8 colored. Price, $6 net. Philadelphia: P. Blakiston's Son & Co., 1909.

Surgeon Gatewood, from his long experience in the navy and in this especial line, is well fitted to prepare a text-book on naval hygiene. He first takes up naval vital statistics, which he considers the basis of the navy's hygiene, and the air within and without the ship, and in these includes the diseases of seafaring people, which are largely due to lack of proper adjustment between the spaces in the ship and the air and water. The author then considers the matter of light without and within the ship, including illumination, absorption, and reflection of light, the color of clothing in the tropics, etc.; the ship's water and drainage; the hardness of water and its reduction; lavatory arrangements on ships; the storage of water; water distillation, analysis of water; purification of water; camps and camp sites. The chapter on the food of the navy is especially well illustrated with colored plates, showing the natural appearance of healthy beef. A number of illustrations of various edible fish, which take up considerable space, are inserted for some incomprehensible reason. In this chapter is taken up the matter of the proper balance of ration, its determination or analysis, the ideal diet in the tropics, and the care of foods. The navy's clothing, the question of clothing in relation to the body temperature is next discussed; education of the skin, chemical regulation of temperature; conductivity of clothing materials; the respective benefits of wool, linen and cotton; the value of dry clothing; night clothes, uniforms, the care of clothing, etc. Disinfection of the ship is naturally a very important question, and is well and fully considered. The vital causes of disease are detailed; disinfection, isolation to prevent lines of travel; value of disinfectants, and the various communicable diseases expected to be met with on shipboard. Dr. Gatewood also discusses insecticides and the various disinfectants. An entire chapter is devoted to naval recruiting. This deals with the method of making examinations of recruits; the requirements for success in selecting recruits; the object of medical examination in recruitment, and the standardization of the recruit and of the examiner.

MYELOISCHE METAPLASIE UND FÖTALE BLUTBILDUNG UND DEREN HISTOGENESE. Von Dr. med. Heinrich Fischer, Sanatorium "Untere Waid" bei St. Gallen (Schweiz). Paper. Pp. 140. Price, 4 marks. Berlin: Verlag von Julius Springer, 1909.

The facilities which German investigators have for putting out their more extensive publications in the form of monographs is a source of envy to their American colleagues. Technical and medical journals can not afford to turn over the necessary amount of space for this sort of article, while to attempt to publish independently would be almost inevitably ruinous. In Germany, however, it seems to be possible to float almost any publication, however technical, provided it has merit. Fischer's monograph of 140 pages is one of this class.

In certain conditions we find that organs among whose functions we do not ordinarily consider formation of leucocytes and erythrocytes have taken on this function in circumscribed cellular areas which spring up in various places. This "myeloid metaplasia" we associate especially with leukemia, the finding of so-called lymphoid nodules in the liver and elsewhere being a familiar observation. As Fischer shows, however, this peculiar sort of atavism of tissues, whereby they revert to their fetal character of blood-forming organs, is observed to greater or less degree in sundry conditions besides the typical blood diseases. This myeloid metaplasia was ascribed by Neumann and Ehrlich to a metastasis of cells from the bone-marrow, since this was recognized as the only place in which such blood-forming cells were normally present, a view which has long remained prevalent because of the authority of Ehrlich. Other investigators have, however, brought forward evidence that the myeloid cells were not necessarily metastatic but might be present in many tissues as the result of metaplasia of the fixed tissue cells, and M. B. Schmidt in particular demonstrated that the endothelial cells of the liver may manufacture both white and red corpuscles.

Fischer reviews systematically and effectively the facts and theories that bear on both the normal and pathologic formation of blood cells, and then recounts his own observations. These lead him to the conclusion that the view that foci of hematogenic activity in the tissues do not arise through metastasis of marrow cells, but by metaplasia of connective tissue cells especially, and possibly also from endothelial cells. Many interesting observations are recorded concerning other than this main problem, and the pamphlet is of considerable value to hematologists and pathologists.

WALSH'S PHYSICIANS' COMBINED CALL-BOOK AND TABLET. Flexible leather, with flap and pocket. Price, $1.50. Washington, D. C.: Ralph Walsh, M.D., 1804 H Street, N. W.

The usual physicians' visiting list has been modified by Walsh so that it may also be used as a ledger. It contains much useful information; a very concise clinical table of the eruptive fevers, a table showing the changes in strength of important tinctures made official by the last U. S. Pharmacopeia; a complete dose-table for adults; poisons and their antidotes; diet list; the use of the thermometer; facts about infants, etc. The book is of the usual size and is arranged for a monthly record. Pages for memorandum, addresses, obstetric records, and a cash account, are included.

A TEXT-BOOK OF PHYSIOLOGIC CHEMISTRY. By John H. Long, M.S., Sc.D., Professor of Chemistry in Northwestern University Medical School, Chicago. Second Edition. Cloth. Pp. 396, with 42 illustrations. Price, $2.50 net. Philadelphia: P. Blakiston's Son and Co., 1909.

The second edition of this text-book presents some important changes, including the new protein classification adopted by the American societies and a much fuller discussion of the subject of the urine with a new chapter on the methods of urine analysis. The book gives a very clear statement of the chemical facts which should be required in medical schools, while omitting the details which are of interest only to specialists. Long appreciates the danger of presenting more to the student than the student has time to master properly, and a careful examination of the work shows that this danger has been successfully avoided. This new edition will be welcomed both by teachers and students.

THE BLOOD IN HEALTH AND DISEASE. By R. J. M. Buchanan, M.D., F.R.C.P., Professor of Forensic Medicine in the University of Liverpool. Cloth. Pp. 318, with illustrations. Price, $4.50. New York: Oxford University Press, 1909.

This book is evidently prepared to meet the requirements of medical students, but it is, like so many other text-books, not flattering to the ideals of this class of humanity. It is a perfectly good synopsis of the subject of hematology, but there is nothing about it to interest or stimulate the average student, and it will not satisfy the better type of student who wishes to know something of the evidence before he accepts conclusions. Such a book—and there are many not so good as this one—may have a certain field of usefulness and satisfy the demands and desires of many students, but instructors with progressive ideas as to medical education do not exult at their publication. This particular hematology is at its best in the discussion of the changes in the blood in the diseases studied most commonly by the routine methods of the clinical laboratory; with other conditions Dr. Buchanan seems less familiar, and much of recent progress in medical science is disregarded and superseded views are quoted as if established facts. For example, the occurrence of the pneumococcus in the blood in pneumonia is referred to as if occasional, and of grave prognostic import; although it has been abundantly shown, especially by Rosenow, that pneumococcemia is practically constant in pneumonia, J. H. Wright's observations on the origin of the blood platelets are not mentioned, and many similar omissions might be recorded. The book is embellished with many excellent reproductions of careful colored drawings of blood preparations made by Dr. Buchanan, and in general, the publisher's part of the work is exceptionally well done.

NEURASTHENIA. By Gilbert Ballet, Professor *agrégé* at the College of Medicine of Paris. Translated from the Third French Edition by P. Campbell Smith, M.D. Cloth. Pp. 408, with 7 illustrations. Price, $2 net. New York: Paul B. Hoeber, 1909.

Precisely at this time, while the epidemic of psychotherapeutic "afflictions" is still raging in and out of the profession, Professor Ballet's book on neurasthenia is opportune. Primarily designed as a monograph on treatment, the present (third) edition, of which this is an excellent translation, has expanded so as to include etiology and symptomatology. To those who received their first psychotherapeutic repast out of Dubois' milk-bottle, this book may seem more difficult of digestion, but in the end it will be found more invigorating and real food for men. The volume is replete with good advice and will be profitable alike to specialist and general practitioner.

Though the bulk of the book is devoted to treatment, yet the preliminary short chapters on etiology, symptomatology and classification deserve commendation, as they are clear and conform to the accepted views of neurologists both here and abroad. Unlike Dubois' book, which is a combination of metaphysics, pseudopsychology and psychotherapy, it gives facts and does not confuse the reader by placing hysteria, neurasthenia, psychasthenia, hypochondriasis and every other classified and unclassified nervous trifle under the all-comprehensive head of neurosis and treating them all as one disease. Ballet distinguishes two great types of neurasthenia, (1) the so-called neurasthenia minor, found in childhood and manifesting itself by congenital tendencies to physical weakness and mental insufficiencies, and (2) the fully developed neurasthenia of adults, characterized by exhaustion and irritability, which variety he calls neurasthenia major. This classification is similar to that of Dercum, who calls the form which correspond to Ballet's "neurasthenia minor," "neurasthenoid," that is a condition like neurasthenia, but really belonging to various other psychoses or degenerative neuroses, while Ballet's "neurasthenia major" he considers true neurasthenia and treats it very much as Ballet does—as a physical, not a mental affection.

The chapters on treatment are good. Due credit is given to psychotherapy, but the greatest emphasis is put on the treatment of physical conditions, which we believe proper. In a similar sense Oppenheim has recently answered Dubois in a German publication. Neurasthenia is treated not only by suggestion and persuasion for any existing psychic symptoms which may have developed on the physical disorder, but also by means of electricity, massage, hydrotherapy, the rest-cure, dietetic and climatic treatment, and, last of all, by means of drugs to combat certain visceral symptoms. Ballet is no fanatic and does not offer a panacea for all forms of neurasthenia. Among the many excellent chapters the one on diet, which treats of the various digestive disturbances of neurasthenics, is one of the best and well worth careful study. The book is written in an easy style and adapted to the practitioner's needs.

DISEASES OF THE BONES AND JOINTS. By Joel E. Goldthwait, M.D., Charles F. Painter, M.D., Robert B. Osgood, M.D. Cloth. Pp. 685, with illustrations. Price, $6. Boston: D. C. Heath & Co., 1909.

The authors of this book have not attempted to write on orthopedic surgery, but have developed and amplified a number of papers previously published into this very considerable volume of clinical studies. It seemed best to them to include only those diseases which are most common, and to endeavor to give a concise statement of such matters pertaining to etiology, diagnosis and treatment as they have found helpful and satisfying to the patient and suggestive to the physician.

The book is divided into three sections. The first, entitled "Tuberculosis of the Bones and Joints," really comprises only tuberculosis of the joints and so much of the bone ends as are practically always involved in joint tuberculosis and pass ordinarily under the name of joint tuberculosis.

The second section, "Non-Tuberculous Diseases of the Joints," will be found to be the most interesting part of the book. It comprises infectious arthritis, atrophic arthritis, hypertrophic arthritis, lipomata, neoplasms and their relation to joint surgery, hysteric and functional joints, and the operative technic and mechanical treatment of chronic non-tuberculous joint disease. No one in this country has had such abundant material or has given the subject such thorough and conscientious a study as have the authors. Each year we are all seeing more and more of these cases, and learning to differentiate them from tuberculosis, with which not long ago they were generally confounded. No longer are we justified in passing these cases from one to another as hopeless cases for which nothing useful can be done. We know now that it is our duty to look earnestly for the cause, and finding it to remove it. If we do this the progress of the disease is stayed, and local treatment will be of use and some improvement may be confidently expected. This second section alone is sufficient warrant for the purchase of the volume by any general practitioner.

The third section comprises the other subjects in which the authors have been specially interested, from syphilitic bones and joints, osteomyelitis and rachitis on the one hand to flatfoot, aneurism, round shoulders and the use of plaster of Paris on the other hand, not by any means omitting the pelvic articulations and flexed scapulæ. As a treatise on diseases of the bones and joints the book is disappointing; as a series of clinical studies by earnest students and careful observers in the field of orthopedic surgery, it is most valuable and satisfying.

WALSH'S PHYSICIANS' HANDY LEDGER. A Companion to Walsh's Physicians' Combined Call-Book and Tablet. Half Leather. Pp. 600. Price, $3.50. Washington, D. C.: Ralph Walsh, 1804 H Street, N. W.

This book is intended as a companion to Walsh's Physicians' Combined Call-Book and Tablet. It is of a very convenient size, 7 by 10, containing 600 pages, 1 page for each patient. This record would appear to be particularly useful by reason of the fact that it not only contains in a very small space, the amount due the doctor, but shows when service was rendered, and how. The book is well bound, opening up easily at any page, and also contains an index.

PROTOZOOLOGY. By Gary N. Calkins, Ph.D., Professor of Protozoology in Columbia University, New York. Cloth. Pp., 341, with 129 illustrations, 4 colored. Price, $3.25 net. Philadelphia: Lea and Febiger, 1909.

This book gives a comprehensive and authoritative presentation of modern protozoology. While protozoa are considered primarily from the biologic point of view, physicians can be fully assured that the pathogenic protozoa are not at all neglected. Professor Calkins has wisely chosen to base the book on broad biologic principles, knowledge of which is essential for the successful application of protozoologic facts to medical problems. The general organization and the physiology of protozoa; the protoplasmic age of protozoa; conjugation, maturation and fertilization of protozoa, are clearly and adequately discussed in the first part of the book, after which come chapters on parasitism (including a discussion of protozoa and the cancer problem, in which no radical views are championed), on the pathogenic flagellates, on the pathogenic hemosporidia, and on the pathogenic rhisopoda. There is a good bibliography, an author's and general index. The need that has existed for a book of this kind is well satisfied by Professor Calkins' work, which admirably fulfils all reasonable demands from the medical point of view.

THE PHYSICIAN'S VISITING LIST FOR 1910. Flexible Leather, with Pocket and Flap. Price, $1.00 net. Philadelphia: P. Blakiston's Son & Co.

A welcome annual visitor—one of the best of its kind. Neat, handy and compact.

A MANUAL OF LABORATORY METHODS. By E. M. Perdue, A.M., M.D., Professor of Histology, Bacteriology and Clinical Diagnosis in Hahnemann Medical College, Kansas City, Mo. Cloth. Pp. 188, with illustrations. Price, $1.50. Kansas City: Burton Pub. Co., 1909.

This little book is intended for use by students as a laboratory guide and is in no sense a text-book. It gives in semi-tabular form directions for embedding and staining tissues, for making cultures of and for staining bacteria, for examination of gastric contents and other body fluids and se-

cretions, for examination of water, etc. An appendix contains tables of weights and measures, lists of Gram-positive and Gram-negative bacteria, stains and reagents, normal and decinormal solutions, etc.

PRACTICAL DIETETICS, with Special Reference to Diet in Diseases. By W. Gilman Thompson, M.D., Professor in the Cornell University Medical College. Fourth Edition. Cloth. Pp. 928, with illustrations. Price, $5. New York: D. Appleton and Company, 1909.

The wide relations of dietetics impose an enormous task on the author who attempts to present the subject in all its relations in an up-to-date manner. The rapid advance of knowledge in all directions renders frequent revision of such a work necessary. Dr. Thompson's work aims to present a practical exposition of the dietetic treatment of all diseases which can be specially influenced by food. To do this and to meet the needs of the general practitioner growing out of the advance of dietetic science, the entire work has been rewritten and considerable additions made. That the result is an eminently practical and useful work is evident. The great value of the scientific data is admitted, but these facts need to be supplemented and interpreted by clinical experience. Calorimetric calculations and metabolism experiments are very interesting, but their application to the individual, and especially to the patient, is not always easy. Thompson is not inclined to accept the lower standard for proteins recommended by Chittenden and Fisher, or to sanction entirely the adoption of Fletcherism. He does not always commit himself on disputed questions.

The diagnosis of diseases of the stomach by laboratory methods is touched on, but in a rather unsatisfactory way. It is hard to see how this matter is properly included within the scope of the book, which does not give other diagnostic methods, but if such subjects are to be discussed it seems hardly worth while to give space to utterly unreliable methods like salol test for motor power and the potassium iodid test for absorptive power. In many other places it is evident that the newer researches on the stomach and intestines have not been fully utilized in revising the work.

In spite of the few defects which may be found on critical study, we have to thank Dr. Thompson for a volume that will in general prove a valuable guide to the physician in a field in which instruction is greatly needed.

A SELECTION OF CASES ON MALPRACTICE OF PHYSICIANS, SURGEONS AND DENTISTS. By Martin J. Wade, Professor of Medical Jurisprudence in the College of Medicine, and Lecturer in the College of Law, State University of Iowa. Cloth. Pp. 896. Price, $4.75. St. Louis: Medico-Legal Publishing Co., 1909.

The great value of this volume and the amount of work expended in compiling it may be surmised from the statement made in the preface that "this volume contains practically every (malpractice) case of any importance which has been decided in the courts of last resort in this country and also the leading cases in England."

The cases are arranged in chronological order, the first one occurring in 1767, the last one in July, 1908. The decisions are all given in full so that all the points in connection with any case are clearly set forth. As a rule, to which there are few exceptions, physicians know far too little of the obligations placed on them in the care of the sick. The question whether all of these obligations are just or not is not to be discussed here; but that they exist is very forcibly shown by the discussions handed down by the learned judges in the cases detailed in this volume. It therefore behooves every physician for his own protection to familiarize himself with the facts as they exist, for in no other vocation is one so liable, at a time least expected and under circumstances least deserved, to be muleted out of the savings of years of hard work, as in that of the practice of medicine. This work, therefore, should be carefully read by every physician, be he surgeon, internist or specialist, until he is thoroughly informed of the legal duties and obligations assumed in the care and treatment of the sick.

THE MEDICAL RECORD VISITING LIST OR PHYSICIANS' DIARY FOR 1910. Flexible Leather, with flap and pocket. Price, $1.50. New York: William Wood & Co.

Compact and concise as ever, the annual edition of this memorandum book will be welcomed by many who have come to depend on it for the pocket keeping of accounts. The data in the front part have been changed somewhat.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

CALIFORNIA: Los Angeles, December 7. Sec., Dr. Charles L. Tisdale, Butler Bldg., San Francisco.
DELAWARE: Regular, Dover, December 14; Homeopathic, Wilmington, December 14. Secretary of the Medical Council, Dr. H. W. Briggs, Wilmington.
IOWA: State House, Des Moines, Dec. 7-9. Sec., Dr. L. A. Thomas.
KENTUCKY: The Armory, Louisville, December 14. Sec., Dr. J. N. McCormack, Bowling Green.
MARYLAND: 1211 Cathedral St., Baltimore, December 14-17. Sec., Dr. J. M. Scott, Hagerstown.
PENNSYLVANIA: Regular and Homeopathic, Philadelphia, December 14-17; Eclectic, Harrisburg, December 14-17. Secretary of the Medical Council, Nathan C. Schaeffer, Harrisburg.
VIRGINIA: Lynchburg, Dec. 14.17. Sec., Dr. R. S. Martin, Stuart.

Florida May Report

Dr. J. D. Fernandez, secretary of the Regular Board of Medical Examiners of the State of Florida, reports the written examination held at Tallahassee, May 19-20, 1909. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 45, of whom 40 passed and 5 failed. The following colleges were represented:

College	Year Grad.	Per Cent.
PASSED		
University of Alabama.....(1908) 82, 83;	(1909)	91
Atlanta Coll. of Phys. and Surg.....(1907) 82;	(1909)	87
Medical College of Georgia.....(1907) 77;	(1908)	86
Atlanta School of Med...(1908) 80, 83, 87, 96;	(1909) 82,	83, 84, 88, 89, 90.
Hospital College of Medicine, Louisville.....(1904)		75
Tulane University of Louisiana.....(1908)		89
College of Physicians and Surgeons, Baltimore....(1887)		84
Barnes Medical College.....(1895)		83
Marion Sims College of Medicine, St. Louis.....(1892)		79
Mississippi Medical College.....(1909)		78
Lincoln Medical College.....(1897)		76
New York University Medical College.....(1896)		91
Leonard Medical School.....(1908) 80;	(1909) 76,	94
North Carolina Medical College..(1908) 92;	(1909) 82, 84,	87
Medical College of Ohio .....(1895) 84;	(1904)	82
Starling Medical College.....(1888)		94
Medical College of the State of South Carolina....(1909)		84
University of Nashville.....(1905)		91
Meharry Medical College .....(1899)		75
Gate City Medical College.....(1908)		82
University of Havana, Cuba.....(1909)		77
FAILED		
Barnes Medical College.....(1872)		60
Meharry Medical College.....(1908)	62,	66
Gate City Medical College.....(1908)		62

The college and year of graduation of one candidate who failed was not recorded.

Missouri September Report

Dr. J. A. B. Adcock, secretary of the Missouri State Board of Health, reports the written examination held at Kansas City, September 20-22, 1909. The number of subjects examined in was 12; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 57, of whom 37 passed and 20 failed. The following colleges were represented:

College	Year Grad.	Total No. Examined.
PASSED		
Howard University, Washington, D. C.....(1907)		1
Rush Medical College.....(1909)		1
University of Kansas .....(1907)		1
University of Louisville.....(1909)		5
University of Michigan, College of Medicine.....(1909)		1
University Medical College, Kansas City.....(1909)		6
Ensworth Medical College, St. Joseph.....(1909)		1
Barnes University .....(1909)		4
Homeopathic Medical College of Missouri.....(1909)		1
St. Louis University .....(2, 1908)	(2, 1909)	4
Washington University, St. Louis.....(1909)		2
St. Louis Coll. of Phys. and Surg...(1908)	(3, 1909)	4
Columbia University, College of Phys. and Surg..(1907)		1
University of Pennsylvania.....(1900)		1
Memphis Hospital Medical College.....(1909)		1
Meharry Medical College.....(1908)	(2, 1909)	3
FAILED		
University of Kansas .....(1896)	(1907)	2
University Medical College, Kansas City.....(1909)		3
Barnes University .....(1907)	(7, 1909)	8
St. Louis Coll. of Phys. and Surg..(1908)	(2, 1909)	3
Kansas City Hahnemann Medical College.....(1909)		1
Ensworth Medical College.....(1909)		2
Meharry Medical College.....(1907)		1

Michigan October Report

Dr. B. D. Harison, secretary of the Michigan State Board of Registration in Medicine, reports the written examination held at Lansing, October 12-14, 1909. The number of subjects examined in was 14; percentage required to pass, 75. The

total number of candidates who took the final license examination was 10, all of whom passed. The following colleges were represented:

PASSED College	Year Grad.	Per Cent.
University of Southern California	(1909)	91
College of Physicians and Surgeons, Chicago	(1909)	84.1
Northwestern University Medical School	(1909)	81.4
Detroit College of Medicine	(1909)	80.5
University of Michigan, Coll. of Med	(1908) 78.7, 82.2,	92.1
Univ. of Michigan, Homeo. Dept	(1894) 77.1; (1909)	85.2
Long Island College Hospital	(1892)	82.5

Minnesota October Report

Dr. W. S. Fullerton, secretary of the Minnesota State Board of Medical Examiners, reports the examination held at St. Paul, October 5-7, 1909. Aside from the written examination, practical tests were given in pathology, bacteriology, histology and urinalysis. The number of subjects examined in was 10; total number of questions asked, 110; percentage required to pass, 75. The total number of candidates examined was 20, of whom 13 passed and 7 failed. Twenty-two candidates were licensed through reciprocity. The following colleges were represented:

PASSED College	Year Grad.	Per Cent.
College of Physicians and Surgeons, Los Angeles	(1908)	78.9
Northwestern Univ. Med. School	(1908) 76.8; (1909) 79,	83.4
Fort Wayne College of Medicine	(1898)	76.6
University of Maryland	(1905)	77.8
Boston University	(1909)	78.2
University of Minnesota, Coll. of Med	(1909) 77.4, 77.7, 80,	80
University of Minnesota, Homeopathic Dept	(1907)	75.4
Hamline University	(1908)	79.3

FAILED College	Year Grad.	Per Cent.
Northwestern University Medical School	(1909)	67.9
College of Physicians and Surgeons, Chicago	(1909)	69.9
Hamline University	(1907) 54.6; (1909) 72,	72
St. Louis University	(1908)	59.9
McGill University, Montreal	(1909)	72.5

LICENSED THROUGH RECIPROCITY College	Year Grad.	Reciprocity with.
Rush Medical College	(1895) Wisconsin; (1906) (1908)	Illinois
College of Physicians and Surgeons, Chicago	(1905) Wisconsin; (2, 1908) (1909)	Illinois
Chicago College of Medicine and Surgery	(1909)	Illinois
Northwestern University Medical School	(2, 1908)	Illinois
Indiana Medical College	(1906)	Illinois
College of Physicians and Surgeons, Keokuk	(1888)	Iowa
University of Iowa, College of Medicine	(1905)	Iowa
Baltimore Medical College	(1904)	Iowa
Detroit College of Medicine	(1895) (1907)	Michigan
University of Michigan College of Medicine	(1908)	Michigan
Hamline University	(1908)	N. Dakota
Ensworth Central Medical College	(1906)	Kansas
Ohio Medical University	(1906)	Ohio
Trinity Medical College, Ontario	(1897)	N. Dakota
University of Berlin, Germany	(1868)	Iowa

Mississippi October Report

Dr. S. H. McLean, secretary of the Mississippi State Board of Health, reports the written examination held at Jackson, Oct. 12-13, 1909. The number of subjects examined in was 8; total number of questions asked, 64; percentage required to pass, 75. The total number of candidates examined was 80, of whom 21 passed, including 5 non-graduates, and 59 failed, including 25 non-graduates. The following colleges were represented:

PASSED College	Year Grad.	Total No. Examined.
Birmingham Medical College	(1909)	1
Chicago College of Medicine and Surgery	(1909)	1
University of Louisville	(1909)	1
Tulane University of Louisiana	(1906)	1
Mississippi Medical College	(1909)	3
Jefferson Medical College	(1909)	1
University of Tennessee	(1909)	1
Memphis Hospital Medical College	(1909)	4
Chattanooga Medical College	(1909)	1
University of Nashville	(1903)	1
University of Virginia	(1908)	1

FAILED		
Georgia College of Eclectic Medicine and Surg.	(1908)	1
Atlanta College of Physicians and Surgeons	(1903)	1
Southern Medical College, Atlanta	(1882)	1
Flint Medical College	(1909)	2
Louisville Medical College	(1892) (1904)	2
Mississippi Medical College	(1907) (2, 1909)	3
St. Louis College of Physicians and Surgeons	(1908)	1
Leonard School of Medicine	(1909)	1
Hahnemann Medical College and Hospital, Phila.	(1908)	1
University of Nashville	(1905)	1
Memphis Hosp. Med. Coll.	(1903) (2, 1908) (3, 1909)	6
University of Tennessee	(1909)	1
Meharry Med. Coll.	(1905) (1907) (4, 1908) (5, 1909)	11
Knoxville Medical College	(1909)	1
College of Physicians and Surgeons, Memphis	(1908)	1

Medicolegal

Health Powers Versus Private Rights

The Supreme Court of Vermont says, in the case of State Board of Health vs. Village of St. Johnsbury and others (73 Atl. R. 581), that a statute of that state gave the board the general oversight and care of all waters used by any cities, towns, villages, or public institutions, or by any water or ice companies in the state as sources of water supply, and authorized the board to prohibit any town, city, village, public institution, individual, or water or ice company from using water or ice from any given source whenever in its opinion the same was so contaminated, unwholesome, or impure that the use thereof endangered the public health. This statute cannot be said to be palpably in conflict with the constitution, state or federal; nor can it be confidently asserted that the means prescribed by it have no just relation to the protection of the public health and the public safety. It must be held, therefore, that the board has authority, if properly exercised, to restrain the defendants, as it did, from the furnishing and the use of the village water for domestic purposes until, in the opinion of the board, the danger to the public health ceases.

It was contended that no order could lawfully be made by the board in restraint of the personal liberty of the citizen, for, if water was furnished by the village in its mains and taken into the houses, the board had no authority to punish those who used it for domestic purposes; that the owners of the houses had the right to drink it, and their tenants had the same right, even though forbidden, etc. But the right of the people of the state by their legal representatives of governing and regulating the internal police of the state embraces such reasonable rules and regulations, established directly by legislative enactment, as will protect the public health and the public safety. And the state may invest local or state boards created for administrative purposes with authority in some proper way to safeguard the public health and the public safety. The way in which these results are to be accomplished is within the discretion of the state, provided the powers and functions of the general government are not thereby infringed, nor any constitutional provision of the state or the United States.

If the mode adopted by the state for the protection of the public health and safety of its local communities proves to be objectionable, inconvenient, or even distressing to some, if nothing more can reasonably be affirmed against the statute, the answer is that it is the duty of the constituted authorities primarily to keep in view the welfare and safety of the many, and not to permit their interests to be subordinated to the wishes or the convenience of the few.

Questionable and Inadmissible Evidence in Malpractice Case

The Supreme Court of Michigan says that the plaintiff in the malpractice case of Farrell vs. Haze (122 N. W. R. 197) sustained, on a Tuesday, an injury to his right foot, ankle and leg—a "Potts fracture." The defendant was employed, and put the injured member in a plaster of paris cast. As things went, if he cut—opened—the cast on Wednesday, he was admittedly without fault. If he did not cut it until Sunday, and if the foot and leg were then in the condition described by plaintiff and his witnesses, he did not exercise ordinary professional skill and judgment, and for the resulting injury he was liable. The defendant testified that he cut the cast on Wednesday, the next day after the injury. He kept books and employed a bookkeeper. It was his practice to make a memorandum of visits to patients on prescription blanks and to hand the memoranda to his bookkeeper for entry by her into a daybook. She also kept a ledger. The slips, daybook and ledger were produced in court, and were offered and received in evidence over the objection that they were all immaterial, incompetent and self-serving. The purpose in offering them was not to show the state of an account with the plaintiff, but to corroborate the defendant's testimony concerning the date of cutting the cast by a memorandum made by him at the time. The court avoids deciding whether the memoranda were really admissible in

evidence for the purpose stated or not. It merely says that, assuming, but not deciding, that the memoranda were evidence to the jury of the facts contained in them, it was within the discretion of the court to allow them to be taken to the jury room, and it was not an abuse of that discretion to refuse to allow them to be taken there.

It was one of the undisputed facts in the case that the bones in the foot and ankle became diseased, and that this condition rendered amputation necessary. What caused the bones to become diseased? The plaintiff's contention was that most probably the cause was the treatment received from the defendant. But the opinions of the experts did not support this contention. It is not enough to show a state of facts equally consistent with unskillfulness and negligence and with skillfulness and due care. Therefore the jury should have been instructed by the judge, as requested, that: "The question whether the loss of the plaintiff's foot was attributable to anything that the plaintiff claims the defendant did or omitted to do is a scientific question, which the jury cannot determine for itself, and can be answered only by an expert; and inasmuch as no expert or medical man or surgeon has stated that the loss of the foot in his opinion came from anything the defendant did or omitted to do, therefore I charge that you cannot take the loss of the foot into consideration in this case or hold the defendant liable therefor."

The plaintiff produced in court, but under covering, what were stated to be the bones of the amputated limb, and proposed to exhibit them. The court is of opinion that they should not have been produced or offered in evidence. It is conceivable that if they were in the same condition they were after the injury, and while the defendant was treating the limb, the extent and nature of the various fractures produced by the injury being in question, their examination and perhaps their production in court would have been of value. But the plaintiff has proved that various portions of the bones were removed before the amputation took place. He had proved that their condition before and at the time the limb was amputated indicated a gradual and continuing disintegration of the bones from some cause which was active long after the defendant ceased to treat the injury. It could not be apprehended that the jury would be enlightened or instructed by an examination of the remains by themselves or by witnesses in their presence.

Again, the court holds that one who is not possessed of the requisite qualifications of a physician and surgeon cannot be exempted from liability on the ground that his mistake was caused by an error of judgment. But want of requisite qualifications is not shown by proving that he was discharged by a patient and another physician hired who changed the treatment.

A physician, who testified that the defendant possessed the skill of the average surgeon, was asked, on cross-examination, if he knew of the defendant's treating certain cases, and particularly one where he was discharged and the treatment entirely changed. The court says that it could perceive no purpose in asking these questions, except the one of producing by incompetent means and without tendering the necessary issue the impression that the defendant was lacking in professional skill because he had failed in other cases to satisfy his patients and the physician who succeeded him.

The judgment obtained by the plaintiff is reversed and a new trial granted.

Sufficient Evidence as to Practicing Without a License

The Supreme Court of Washington says, in the case of State vs. Dodson (102 Pac. R. 872), where it affirms a conviction of practicing medicine without a license, that it was contended that under the provision of the statute the state did not make out a prima facie case against the defendant, because it did not show that he had not been a practicing physician prior to the enactment of the statute under which he was convicted. But it is held sufficient that the state showed by the clerk that the defendant had not filed a license in his office, and that none had been filed. The statute makes the records of the clerk's office prima facie evidence of the existence or nonexistence of a license.

Again, the court says that the statute provides that "any person shall be deemed as practicing medicine within the meaning of this act who shall have and maintain an office or place of business with his or her name and the words physician or surgeon, "Doctor," "M. D.," or "M. B." in public view, or shall assume or advertise the title of doctor or any title which shall show or shall tend to show that the person assuming or advertising the same is a lawful practitioner of any of the branches of medicine or surgery in such a manner as to convey the impression that he or she is a practitioner of medicine or surgery under the laws of this state." Evidence to prove that the defendant had done the things prescribed by the statute was offered, and it was for the jury to determine the weight of such evidence.

Current Medical Literature

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York

November 20

1 Aspects of Rocky Mountain Spotted Fever as Shown by Recent Investigations. H. T. Ricketts, Chicago.
2 *Creosote Treatment of Pulmonary Tuberculosis. B. Robinson, New York.
3 Plea for a Reform in Medical Education. E. Souchon, New Orleans.
4 Idiopathic Hydropneumothorax with Complete Recovery. A. P. Francine, and H. R. M. Landis, Philadelphia.
5 A Fragmented Filiform Bougie Removed from the Male Urethra Without Operation. V. C. Pedersen, New York.
6 *A Statistical Analysis of over 68,000 Cases of Typhoid. A. K. Sallom, Philadelphia.
7 Acute Gangrenous Cholecystitis: Gall-Stone in the Cystic Duct; Perforation of the Gall-Bladder. E. Williams, Patterson, La.

2. **Creosote Treatment of Pulmonary Tuberculosis.**—Robinson repeats that by the combined, persistent, intelligent use of beech-wood creosote internally and by inhalation, many patients may be saved who otherwise would die. In nearly all cases, no matter what the stage of the disease, much relief to symptoms may be obtained. This treatment is simple and inexpensive, and interferes with no other rational doing. It greatly supplements that doing. Creosote treatment is of great value as a preventive treatment, when pulmonary tuberculosis is a menace to the individual, either by reason of constitutional tendency, exposure to infection, or both. To judicious rest, when required, fresh air, and proper food, add creosote treatment, with or without lime salts, and there is at present little or nothing in the way of further treatment to insist on.

6. **Typhoid.**—This report represents a study of the cases of typhoid fever which have occurred in Philadelphia during a period of eleven and one-half years. From January, 1898, to June, 1909, there occurred 68,943 cases. Of this number 8,102 patients died, giving a mortality of slightly over 11.75 per cent. The greatest number of cases occurred in February, there being an average of 759 cases. January is a close second, averaging 694 cases. The average number of cases for each month then gradually falls, reaching its lowest ebb during July. It again rapidly rises, reaching a second maximum during September. During October and November it falls, to rise again in December. From the data at hand Sallom believes that the filtered water has been instrumental in the reduction of the number of cases of typhoid, for it appears that while the number of cases was greatly reduced in the district receiving filtered water, typhoid fever was still prevalent in the district not receiving filtered water, and in this manner increasing the general number for the entire city.

Boston Medical and Surgical Journal

November 18

8 Recent Experimental Work on Hemorrhagic Conditions. W. P. Lucas, Boston.
9 *Treatment of Summer Diarrhea as Influenced by Etiology. C. H. Dunn, Boston.
10 Hodgkin's Disease in a Child. H. De Wolf, Providence, R. I.
11 *Cure of Club-Foot in Infancy without Operation. A. Ehrenfried, Boston.

9. **The Treatment of Summer Diarrhea.**—The treatment of the diarrheal diseases prevalent in the summer should, Dunn believes, be based on the known facts as to the etiology of the disease. This may, for the four types, be briefly summarized as follows: 1. Acute nervous diarrhea: Castor oil or calomel, temporary dilution of food, paregoric in persistent cases. 2. Acute intestinal indigestion, type of deficient secretion, irritative diarrhea: Castor oil or calomel, boiled water for twenty-four hours, barley water or other carbohydrate solution for a second twenty-four hours, followed by dilute milk modifications, with low fat and casein and high sugar and whey proteid; irrigation of the colon in long-standing cases. 3. Acute intestinal indigestion, fermentation type, fermental diarrhea: Castor oil or calomel, boiled water for twenty-four hours, barley water for the second twenty-four hours; avoid proteid foods, such as albumin water or whey. It is safest not to begin milk-feeding till the third day, and then very cautiously, with modifications low in fat, whey proteid and casein. Living lactic acid bacilli are a specific against this disease and are given in ripened fat-free milk or in buttermilk, which is best begun after forty-eight hours; subsequent feeding according to the type of indigestion also present; irrigation of the colon twice daily; antidysenteric serum in resistant cases.

11. **Club-Foot in Infancy.**—The treatment which Ehrenfried has practiced consists in manipulations and retention. The manipulation is performed after this fashion: The ankle is held firmly by the fingers of the left hand. The right hand gently but firmly grasps the forefoot, which, the heel being fixed, should be gradually abducted as far as possible. If the manipulations cause pain the infant will become rebellious and spasm of the muscles will be set up, which will interfere with the desired object. This abduction should be repeated several times, each time carrying the foot out as far as possible and holding it a few seconds, allowing it to return gradually. Then the same procedure, supplemented by eversion of the foot, should be repeated for a minute or two. The entire foot should be gradually everted until the sole looks outward. Then, with the foot abducted and everted, dorsiflexion at the ankle should be practiced. Finally, the entire foot may be circumducted about the ankle. After the foot has been rendered as flexible as may be by this procedure, it is fixed in the position of greatest correction or overcorrection allowable, by some retentive apparatus. The purpose of this retention is to maintain the stretch on the structure already noted and at the same time to allow the lax opposing structures to contract and to prevent and correct the maldevelopment of the bones of the ankle. Fixation may be had best by means of plaster of Paris. The plaster is applied from thigh to tips of toes, with the knee flexed, so as to prevent the cast from twisting on the leg, and allowing a return of the varus deformity. If the plaster is applied to the best advantage three two-inch rolls are ample in a young infant. Of the first roll, half is used in making a collar about the forefoot. This is applied—the foot hanging relaxed—in such a way, with circulars and reverses, as to lie snugly against the foot. It should extend to the tips of the toes, but should not cramp them or hide their extremities. It should fit closely against the inner border of the great toe, to its very tip, so as to give efficient leverage in abduction. The remainder of the roll is applied in circular turns about the thigh, carried as high up as possible. When the collar has become solid the second roll is applied, in the form of circular turns over the thigh and under the ball of the foot. This roller should always be applied in such direction that the turns, when drawn tight, will naturally assist in elevating the outer border of the foot, and maintaining eversion. The third roller is put on immediately and is used to cover in the knee and heel. The plaster here need not be thick, as it is not essential in maintaining the position; and for the sake of lightness it had best be applied in recurrent turns. Plasters are reapplied every two weeks, each time after thorough manipulation.

Ehrenfried has found it an advantage in some cases to make use of a splint after the plasters have been discontinued. This is made of tin with an upright of heavy iron wire which can be bent so as to give any degree of dorsiflexion or eversion. It is applied to the leg, over sheet bandage. In convalescence it may be worn only at night and the foot manipulated by the mother or nurse in the morning after it is removed and at night before it is applied.

New York Medical Journal

November 20

12 Development of the Medical Profession. S. W. Mitchell, Philadelphia.
13 *Differential Points in the Skin Lesions of Pellagra. I. Dyer, New Orleans.
14 *Antigen in Pellagra. C. C. Bass, New Orleans.
15 *Treatment of Gastric Ulcer. M. Einhorn, New York.
16 *An Outline for a Coordinated Attack on Tuberculosis. L. Brown, Saranac Lake, N. Y.
17 Certain Contagious Diseases of the Skin. F. C. Curtis, Albany, N. Y.
18 Use of Mercury Succinimid in Superficial Tuberculous Lesions. R. Hertzberg, Stamford, Conn.
19 Tonsil Removal. E. V. Hubbard, New York.

13, 14. Abstracted in THE JOURNAL, Nov. 13, 1909, pp. 1663, 1665.

15. **Gastric Ulcer.**—The indications for any surgical treatment of gastric ulcer, according to Einhorn, are as follows:

1. In large, recurrent gastric hemorrhages threatening life, the ulcer ought to be excised in the interval of a gastroenterostomy established, to prevent renewed hemorrhage.
2. Small losses of blood that cannot be checked and endanger life through their persistence require similar treatment.
3. Perforation of the ulcer demands always immediate operation (excision or invagination of the defect and suture) as soon as the diagnosis has been made.
4. An ulcer situated at the pylorus and attended with peristaltic restlessness of the stomach and continuous hypersecretion.
5. Advanced stenosis of the pylorus requires gastroenterostomy.
6. Duodenal ulcers accompanied by pylorospasm and beginning peristaltic restlessness of the stomach.
7. Gastric ulcers with formation of a tumor, no matter where the seat (pylorus, small curvature, etc.), always demand gastroenterostomy, usually with excision of the tumor. If this tumor is situated in the lesser curvature and cannot be resected, it is still curable in case it is caused by simple connective tissue proliferation (callous ulcer formation).

16. **Coordinated Attack on Tuberculosis.**—Results at the Adirondack Cottage Sanitarium show that up to November, 1908, when the records covering twenty-two years are roughly scanned, 52 per cent. of the patients in an incipient stage, 25 per cent. of the moderately advanced, and less than 2 per cent. of those in far-advanced stages are alive. In other words, a patient in the incipient stage has at least twenty-six times as good a chance of permanent recovery as one in the far-advanced stage. In view of the fact that tuberculosis is now said to be so curable that all a patient needs is fresh air (some would deny any tempering of the cold to the shorn lambs), a chair, and some milk and eggs, in view of this, these figures are of importance. Not every patient with tuberculosis will recover, no matter how early his case is diagnosticated, and no matter how soon put under the most approved treatment. But in an early case the patient has twenty-six times better chances for permanent recovery than in a late one.

Medical Fortnightly, St. Louis

November 10

20 *Operation for the Restoration of the Female Pelvic Outlet Based on the Anatomic Structure and Physiologic Functions of the Parts. W. L. Crosthwait, Holland, Tex.
21 Mastoiditis and Other Complications of Acute and Chronic Suppurative Otitis Media. E. E. Clark, Danville, Ill.
22 Local Versus General Anesthesia. B. M. Ricketts, Cincinnati.

20. **Restoration of Female Pelvic Outlet.**—Crosthwait describes a technic for the average case in which the perineal body has been broken up by laceration of component part or parts with rectocele and pouting vagina resulting. The operation is the open flap-splitting one, giving free exposure of the external sphincter and levator ani and superficial transverse perinei with their fascia. A U-shaped incision is made from just below the orifice of the glands of Bartholin along the mucocutaneous margin. By blunt dissection, the posterior wall of the vagina is separated from the rectum up to the highest point of the rectocele and laterally as far as the scar tissue extends and far enough to give free exposure of the margins of the levator ani muscles and their fascia. This point is important, for the fascia has more to do in restoring strength to the injured parts than the muscle tissue itself.

The second step is to suture the levator ani and fascia. From two to four sutures are required and the suture material should be fifteen-day chromic catgut. It is important that these sutures be placed far enough out to include the fascia. They should be placed so as to lap the edges of the muscles. The next step is to bring up the severed ends of the bulbocavernosus and external sphincter ani and unite them in the perineal center. Then the fibers of the transverse perinei are caught up and inserted in their normal place. This, however, cannot always be done, as those muscles when parted from their insertion often retract so far that they cannot be found. The last step is to suture the flap vertically with buried twenty-day catgut.

The advantages of this operation are said to be: 1. There is exact anatomic approximation of the parts. 2. It gives a permanent cure with full restoration of lost function. 3. It is far less painful during the process of healing, with no sutures to remove. 4. It can be done in far less time than any other method.

New Orleans Medical and Surgical Journal

November

23 Ophthalmic Surgery. H. D. Bruns, New Orleans.
24 Abdominal Pain. J. T. Halsey, New Orleans.
25 Abdominal Pain from a Surgical Standpoint. J. A. Danna, New Orleans.
26 *The Hyperacid Stomach. S. K. Simon, New Orleans.
27 The Diagnositic Value of Blood Examination. C. C. Bass, New Orleans.
28 *Treatment of Syphilis by Mercurial Inhalations in a Proper Hot Room. S. Schiro, New Orleans.

26, 28. Abstracted in THE JOURNAL, May 29, 1909, p. 1782.

Archives of Diagnosis, New York

October

29 *Diagnosis of Angina Pectoris. G. R. Butler, Brooklyn.
30 Prognosis in Pneumonia. D. Rochester, Buffalo.
31 Sense of Weight in the Lung in Diagnosis of Lobar Pneumonia. T. F. Reilly, New York.
32 *Present Status of Still's Disease. G. R. Pisek, New York.
33 Significance of Low Blood-Pressure in Arteriosclerosis. L. F. Bishop, New York.
34 The Surgeon's Tentative Diagnosis of Eye-Strain. R. T. Morris, New York.
35 Recognition of Obscure Types of Gastric Ulcer. A. Bassler, New York.
36 Sigmoid Diverticulitis. D. N. Eisendrath, Chicago.
37 Thrombosis and Embolism of the Mesenteric Vessels. H. Fischer, New York.
38 Technic in Gynecologic Diagnosis. J. V. Young, New York.
39 Prognosis. S. Salinger, Chicago.
40 The Diagnosis of Painful Conditions of the Feet. S. Epstein, New York.

29. **Angina Pectoris.**—That the diagnosis of angina pectoris, at least in its milder forms, cannot be made from the history alone, is contended by Butler. The other forms of cardiac pain, of toxic or neurotic origin, the latter especially in women, may exactly simulate a true angina pectoris. After allowing due weight to the age, sex, and detailed history of the patient, it is necessary to ascertain the presence or absence of signs of organic disease at the root of the aorta. On this hangs an enormously important decision. When plain signs of general arterial or aortic disease co-exist with a history of precordial pain, there need be no hesitation in making a positive diagnosis of true angina pectoris. But it is otherwise in patients with cardiac pain in whom, as may happen, the accessible arteries are soft, and who do not present signs of gross aortic or pericardial lesions.

In the election between true and false, organic or functional, there is one physical sign which Butler believes casts the controlling vote. It is so slight, and apparently so insignificant, that one almost hesitates to mention it. It is simply a slight clicking sound, of a harsh or rough quality, accompanying, or following at a barely perceptible interval, the sound of aortic closure. It is not an accentuation of the closure sound of the valve, such as the loud, clean, "cork and bottle" aortic second sound, which is signficant of high arterial tension. Nor is it to be confused with a reduplication of the second sound. The slight harsh click, to which Butler refers, is said to suggest to the ear a definite roughening or thickening of the edges of the aortic cusps. When autopsies have been obtained the findings have justified such an interpretation of this auscultatory sign. If, then, the aortic cusps are roughened, it is certainly a fair inference that the root of the aorta shares in the diseased process. Butler recalls but two cases of true angina in which this sound has not been heard.

32. **Still's Disease.**—Pisek holds that the polyarthritis described by Still seems to be the result of a chronic sepsis, which while not sufficiently potent to completely overpower the young organism, has destroyed resistance by enfeebling the phagocytic power of the blood, and lowering the activity of the lymphatics. This special form of chronic arthritis, he considers, is worthy of consideration by the general practitioner, as the prognosis is not necessarily hopeless.

Journal of the Oklahoma State Medical Association, Muskogee

November

41 Organization of the Medical Profession. B. J. Vance, Oklahoma City.
42 Treatment of Pulmonary Tuberculosis. W. G. Little, Okmulgee.
43 Gynecologic Conditions. O. R. Jeter, Reed.
44 Placenta Prævia. M. M. De Arman, Mangum.
45 Treatment of Acute Articular Rheumatism. L. F. Watson, Oklahoma City.

Cleveland Medical Journal

November

46 Ten Years' Progress in Protein Metabolism. O. Folin, Boston.
47 Gastric Ulcer. C. F. Hoover, Cleveland.
48 *Precision in the Treatment of Whooping Cough. E. F. Cushing, Cleveland.
49 Clinical and Experimental Observations in Prolonged Infantile Tetany. H. J. Gerstenberger, Cleveland.
50 Achondroplasia; Report of Case with Pathologic Report. H. Hempstead, Cleveland.
51 Acute Anterior Poliomyelitis with Report of Two Cases. H. B. Ormsby, Cleveland.
52 Diagnosis of Tuberculous Hip-Joint Disease. W. G. Stern, Cleveland.
53 Foreign Body in the Right Bronchus. S. H. Large, Cleveland.

48. **Treatment of Whooping Cough.**—At the onset of treatment Cushing has found it well to require that for a week or so the patient be kept in bed. Even when the patient is first seen in the paroxysmal stage of the disease, the brief stay in bed is eminently useful, for the control thus secured enables the physician to initiate his measures of isolation and treatment under the most favorable auspices. In the presence of complications of any sort, or when the disease itself is of a severe type, the paroxysms frequent, and vomiting troublesome, confinement to bed is, of course, indispensable at any period of the illness. At night every window in the child's bedroom should be kept wide open. The cold fresh air of a winter night is far the most efficient nocturnal sedative for the cough of pertussis. That the paroxysms of whooping-cough usually occur more often at night than during the day, as described in the books, is entirely due to vitiated air in the sleeping-room. It is an artificial and not an essential feature of the malady. During the daytime the patient should be indoors as much as possible. Running, or romping, or too vigorous play of any sort, loud laughter or screaming, should be avoided as likely to provoke paroxysms.

The child's meals, even when it is about, and the attack is mild, should not be taken at the family table, but eaten in the nursery to secure quiet, slowness of eating, and an easy control of quantity, for overeating almost invariably provokes a convulsion of cough which brings up all the food taken. For quite another reason, too, the child should be kept from the table and from all other unnecessary contact with the adults of the household, and that is, the risk of contagion to the latter if brought in close range of the cough explosions.

Of drugs, belladonna and antipyrin, and for a sedative, heroin or opium, in the form of paregoric or Dover's powder, have served Cushing best. He commences treatment with a belladonna dose after each meal and heroin at bedtime. The belladonna is given in the way Jacobi has so often advised, that is, beginning with a drop, or even a half-drop of the tincture, to anticipate a possible idiosyncrasy on the part of the patient; the dose is increased one drop each day until a point is reached where within an hour from the time the medicine is taken a distinct flushing of the cheeks occurs. In the child this erythema develops, as a rule, before an uncomfortable dilatation of the pupils results; and when the dose is found which occasions it, a distinct lessening in the intensity and number of the paroxysms is ordinarily apparent. Short of this effect, belladonna seems without influence on the dis-

ease, but when the flushed cheeks show themselves, betterment is the rule. Six or eight drops of the ticture of belladonna are usually sufficient to produce the desired effect in a child from 6 to 8 years old, and this dose should then be continued for a long period. If, on the other hand, no effect on the frequency of the coughing fits is apparent, the belladonna is omitted, and antipyrin administered in its stead, in a dose of 1 grain for each year of the child's age, in solution, and given 3 times a day after meals. At bedtime an appropriate dose of heroin or paregoric or Dover's powder needs ordinarily to be administered.

Denver Medical Times and Utah Medical Journal

November

54 What is the Citizen's Duty Toward the Teaching of Social Health? A. S. Taussig, Denver.
55 The Care of Chronics and Incurables. J. K. Miller, Greeley, Colo.
56 Colds (Acute Coryza). Z. V. Dworzak, Denver.
57 A Singer's Sore Throat. J. E. Free, Billings, Mont.
58 Quarantine Laws in Relation to Tuberculosis—Their Necessity. W. T. Hasler, Lehi, Utah.
59 Syphilis and Gonorrhea. J. McGregor, Parowan, Utah.
60 Bryonin. R. J. Smith, Collinston, Utah.

American Journal of Obstetrics and Diseases of Women and Children, New York

November

61 *Treatment of Retrodisplacements of Uterus. W. H. Humiston, Cleveland, Ohio.
62 *Combined Intraperitoneal and Extraperitoneal Ureterolithotomy for Removal of Stones from the Lower Ureter. E. Jonas, St. Louis.
63 *Surgical Treatment of Tumors of the Bladder. J. W. Keefe, Providence, R. I.
64 *Operative Enlargement of the Pelvis of the Nonpregnant Woman. J. N. Bell, Detroit.
65 *Chylous Cyst of the Iliac Mesentery. C. E. Congdon, Buffalo.
66 *Embryo Abdominal Surgeons with Inadequate Preparation and Knowledge. J. H. Carstens, Detroit.
67 *When Shall we Operate for Ruptured Ectopic Gestation. R. R. Huggins, Pittsburg.
68 *Artificial Anus Following Operation for Intussusception: Three Years' Complete Occlusion of Large Bowel: Method of Restoring Continuity. J. Y. Brown, St. Louis.
69 Personal Experiences in Gall-Bladder Surgery. H. E. Hayd, Buffalo.
70 *How Can we Best Educate Women to Seek Relief Early from Carcinoma of the Uterus? C. C. Frederick, Buffalo.
71 *Calcareous Degeneration of the Fibroid Uterus: Presentation of Specimen. W. B. Dorsett, St. Louis.
72 Nephrocoloptosis. H. W. Longyear, Detroit.
73 *Rupture of the Uterus During Labor. R. W. Lobenstine, New York.
74 Ovarian Pregnancy at Term; Recovery of Mother and Child. W. C. G. Kirchner, St. Louis.
75 *Study of 440 Operations on Appendix. E. J. Ill, Newark, N. J.
76 *Diagnosis Between Appendicitis and Tubal Diseases. R. T. Morris, New York.
77 *Phlegmasia Alba Dolens in Connection with Ovarian Tumor. W. A. B. Sellman, Baltimore.
78 Phases of Puerperal Sepsis. H. O. Pantzer, Indianapolis.
79 Recent Studies of Diarrheal Diseases. W. L. Carr, New York.

61. **Retrodisplacements of Uterus.**—Humiston divides the cases of retrodisplaced uterus into two classes: a smaller one in which active major surgical measures are not required to obtain a cure, and a larger one in which active surgical procedures are necessary. In the first group are all those cases of retroversion of not long standing, and in which there has been no infection or inflammation of the appendages. In most cases of this group miscarriage or labor recently occurred. The prominent symptoms presented are backache, occipital headache, bearing down feeling while in the upright position, frequent but not painful micturition, constipation, disturbed digestion, and an increasing nervousness. Menstruation is increased in amount and frequency, but is not, as a rule, painful. Some leucorrhea is always present. Digestive disturbances are usually prominent. Bimanual examination, as a rule, reveals injury to the pelvic floor and perineum, cervix lacerated, swollen and in axis of vagina. Cervix easily reached with finger, and a continuous resisting body from posterior wall of cervix as far as finger can reach, which is movable. Ovaries can be palpated and are movable and but little increased in size. Fundus of uterus is absent in front. These patients can be cured by curettage, trachelorrhaphy, replacement of uterus, adjustment of well-fitting pessary, and repair of the pelvic floor and perineum by a method that will insure a muscular restoration of the parts.

Unfortunately, he says, 90 per cent. of these cases are complicated when specialists see them, and in these cases, in addition to the above operations, the abdominal cavity is opened and the diseased conditions found dealt with. The results Humiston has obtained with the Gilliam method in 103 cases in three years are highly satisfactory. He has had no deaths in the series, nor have there been complications at delivery in those patients who subsequently became pregnant. All were delivered without artificial aid, except in one case, where low forceps were used. No connection could be traced between the Gilliam operation and the procedure.

62. Abstracted in THE JOURNAL, Oct. 2, 1909, p. 1121.

63, 65, 66, 67, 71, 73. Abstracted in THE JOURNAL, Oct. 9, 1909, pp. 1217, 1218, 1219.

64. **Operative Enlargement of Pelvis.**—Bell suggests that in order to obviate the dangers of pubiotomy the pelvis might be enlarged by operating in the non-pregnant state, and thus prepare the woman for future delivery. The indications for the operation are, according to Bell: A history of two or more difficult deliveries with child born dead, further attempts to secure a living child by premature delivery, a true conjugate diameter of from 7.5 to 8.5 cm., a dread of Cesarean section, and a strong desire on the part of the patient to give birth to a living child. It is granted that only a comparatively small increase in the pelvic diameters can be secured when operating in the non-pregnant state, yet, in a properly selected case the increase is just sufficient to convert an otherwise dangerously contracted pelvis into a comparatively normal one for future childbearing.

In doing the operation in one case, he followed the method of Döderlein in his operation of pubiotomy at term, and spread the severed ends of the bone 1.5 cm., holding them apart with a small steel retractor which was left *in situ* for ten days. There was very little hemorrhage. Healing was slow; but the patient recovered and walked without any discomfort. The pelvic measurements show an increase in the transverse diameters. This proves conclusively that a distinct enlargement of the pelvis can be obtained by operating in the non-pregnant state and preparing the woman for future childbirth. The question of the advisability of this procedure remains to be determined.

68. **Artificial Anus.**—As the result of an appendicitis operation improperly performed, the patient, a boy, had an artificial anus in the median line, through which all fecal matter had passed for three years and a half, there being complete exclusion of the entire large bowel for that length of time. The patient had not had a natural bowel movement during all this time. Brown believes that the boy undoubtedly did not have appendicitis, but that the original condition was intussusception. One of the most interesting features of this was the condition of the ileum from an obstructed band of the ileocecal valve. As stated, the entire large bowel was out of commission for three and one-half years. The most remarkable condition was an ileoitis obliterans, the ileum having contracted and swollen to such an extent that it was almost impossible to get a small grooved director through it. The appendix was free, but showed that it had participated in the peritonitis brought about by the intussusception and the fecal leakage, but to all appearances this was a secondary and not a primary incident. By means of an ileocolic lateral anastomosis the fecal current was turned back into the large bowel.

70, 75, 76, 77. Abstracted in THE JOURNAL, Oct. 16, 1909, pp. 1323, 1324.

Journal South Carolina Medical Association, Florence

October

80 Strychnin in Treatment of Cerebral Hemorrhage. M. J. D. Dantzler, Elloree.
81 Similar Symptomatology in Chronic Appendicitis and Chronic Gall-Bladder Lesions. E. A. Baker, Charleston.
82 Uncinariasis, Miner's Anemia, Egyptian Chlorosis, Hookworm Disease. T. H. Symmes, Fort Mott.
83 Influence of Diseased Teeth and Mouth on General Health. W. E. McCord, Conway.
84 *A Talk to Doctors. J. N. McCormack, Bowling Green, Ky.
85 Tuberculosis Among Children. S. A. Visanska, Atlanta, Ga.
86 Diabetes Mellitus. J. B. Hughey, Greenwood.
87 Spina-Bifida; Report of a Rare Form. J. H. Taylor, Columbia.
88 Methods of Tying Surgical Knots. B. B. Steedly, Spartanburg.
89 The State Board of Health—Its Relation to its Executive Committee. C. F. Williams, Columbus.

84. Published in *Northwestern Lancet*, Oct. 1, 1909.

West Virginia Medical Journal, Wheeling

November

90 Duties of the Medical Profession. V. T. Churchman, Charleston.
91 Surgery of the Heart. G. Ackerman, Wheeling.
92 Production of Certified Milk. W. H. McLain, Wheeling.
93 Hydrophobia. K. M. Jarrell, Clear Creek.

Monthly Cyclopedia and Medical Bulletin, Philadelphia

October

94 Constitutional Conditions Affecting Nasal Catarrh. C. W. Richardson, Washington, D. C.
95 Prognosis of Febrile Cases of Pulmonary Tuberculosis. H. L. Barnes, Wallum Lake, R. I.
96 *Three-day Treatment of Drug and Alcohol Habitúes with Hyoscin. H. V. Riewel, Cleveland, Ohio.
97 Neuroma of the Orbit. H. F. Hansell, Philadelphia.
98 The Adrenals in Sudden Death. C. E. de M. Sajous, Philadelphia.
99 Epithelioma. J. V. Shoemaker, Philadelphia.
100 *Contemporary Workman's Compensation. W. H. Allport, Chicago.

96. **Treatment of Drug and Alcohol Habitués with Hyoscin.**—Riewel summarizes his views as follows: 1. The hyoscin treatment will eliminate the desire of drug and alcohol habitués for these drugs, thus eliminating the element which prevents the patient abstaining by force of will power. 2. Having lost the desire they do very well without intoxicants or the drugs as shown by the increase in appetite, gain in flesh and their general improvement. 3. The question of relapse lies entirely in the sincerity and environment of the patient. 4. The favorable alcoholic addicts are those who earnestly desire to discontinue the use of intoxicants and are willing to change their mode of living and environment, but who cannot until relieved of the craving for liquor. 5. Relapse in both drug and liquor cases is not due to a desire nor suffering after the treatment, but to their curiosity to test the necessity of total abstinence, or to the temptations of social life. 6. A single dose of the drug or drink of liquor, even after one year of total abstinence, is very apt to start the craving, resulting in a condition which is no better than before treatment. 7. This method may prove a valuable treatment in apparently hopless cases of opium poisoning. Interesting experiments along this line might be carried out. 8. The one contraindication for this treatment is the presence of Bright's disease. 9. No patient should be treated unless put to bed and watched by competent nurses day and night during the first week.

100. Published in *Chicago Medical Recorder* and the *Illinois Medical Journal*, October, 1909.

Maryland Medical Journal, Baltimore

November

101 Surgery of the Thyroid (continued). R. Winslow, Braddock Heights.
102 Astereognosis Caused by Tumor of the Posterior Superior Portion of the Right Parietal Lobe. I. J. Spear, Baltimore.
103 Surgery of the Kidney. A. McGlannan, Baltimore.
104 The Almshouse Care of the Insane. N. M. Owensby, Baltimore.
105 Harvey (1578-1657 A.D.). H. M. Cohen, Baltimore.

Long Island Medical Journal, Brooklyn

November

106 Faucial Tonsils—Hypertrophied and Otherwise. C. E. Scofield, Brooklyn.
107 *Appendicitis in Children. A. H. Bogart, Brooklyn.
108 *Acute Anterior Poliomyelitis. Le G. Kerr, New York.
109 Blastomycosis. R. H. Fowler, New York.

107. **Appendicitis in Children.**—Bogart says that appendicitis in children is a comparatively frequent disease, insidious in its onset and rapid in its development, with a decided tendency toward the development of general peritonitis, with a fatal termination if neglected; and that whatever holds good with regard to immediate operation in the adult is doubly true in children, and that in the light of present knowledge no patient should be permitted to go for three days without operation. Bogart emphasizes the fact that the removal of the appendix in a child by a competent surgeon is comparatively without danger and recommends that it be done in every case as soon as a diagnosis has been made, provided that a competent surgeon and the proper facilities can be had to do it. In this and in no other way can the present mortality be reduced.

108. **Acute Anterior Poliomyelitis.**—In one epidemic, between Aug. 7 and Sept. 4, 1909, Kerr observed 53 cases of the disease, and the symptoms of the onset were as follows: Fever, accompanied with diarrhea, 10; fever, cough and diarrhea, 4; fever, vomiting, cough and diarrhea, 12; fever alone, 4; fever and constipation, 7; fever and vomiting, 3; fever and cough, 1; fever, cough, vomiting and constipation, 3; and no symptoms noted, 3. In the remaining 6 cases, the symptoms of the onset were those of a definite disease, associated with the other symptoms, and were diagnosed as follows: four suffered from tonsillitis, 1 from lobar pneumonia and 1 from acute gastroenteritis. From this it is seen that the more suggestive symptoms are the fever, diarrhea, cough and vomiting. With such symptoms present, and nothing else to guide us in the making of a definite diagnosis, we must take the position of withholding the expression of an opinion as to the disease present.

As soon as a child was suspected of having the disease, as indicated by the prodromal symptoms which are suspicious in the presence of a known epidemic, it was immediately placed in a hot blanket pack. The wet blanket was wrung out after being placed in water of the usual temperature, 160 F., and in this the child was wrapped with hot water bottles placed at the feet. The application was sufficiently prolonged to induce a free perspiration. This procedure was followed even in the presence of considerable rise in temperature, but was never repeated. The rather copious drinking of hot water was encouraged. In many instances the vomiting was almost immediately relieved and the free perspiration which was brought about by the hot blanket pack was continued or augmented. But even if the vomiting persisted or seemed to be increased by the ingestion of the hot water, its use was continued, although the amounts given were decreased. The administration of the water was continued for twelve hours.

The bowel was thoroughly emptied by a hot enema and in most of the cases this enema contained 1 ounce of magnesium sulphate and 2 ounces of glycerin to the quart of water. Immediately following the hot enema, the child was given a single large dose of castor oil, and was then placed in bed in a quiet and darkened room and allowed but one attendant. So far as possible the child was prevented from lying on the back. Cold applications were immediately made over the spine and particularly in the lumbar region. This was the procedure during the first twelve hours and no food was allowed during this period. At the end of the first twelve hours the hot enema was repeated and the ingestion of the hot water stopped. For two days the diet was restricted to fluids and if any further action of the bowel was needed calomel in broken doses was used. During this stage only two drugs were used, belladonna and ergot. Both were administered in full doses. Of the number so treated, in no instance was the child afflicted by any paralysis nor was there the further development of symptoms which would lead to the recognition of a definite disease.

Kansas City Medical Index-Lancet

November

110 *Hereditary Spastic Paraplegia: Report of Seven Cases in Two Families. J. Punton, Kansas City.
111 Renal Tuberculosis. W. T. Reynolds, Kansas City.
112 *Treatment of Asiatic Cholera During the Recent Epidemic. H. J. Nichols and V. L. Andrews, Manila, P. I.
113 Office Treatment of Hemorrhoids and Fissure. C. J. McGee, Leavenworth, Kan.

110. Abstracted in THE JOURNAL, July 31, 1909, p. 406.

112. Published in *Philippine Journal of Science*, April, 1909.

Surgery, Gynecology and Obstetrics, Chicago

November

114 *Technic of Resection of the Male Bladder. W. C. Lusk, New York.
115 *Postoperative Psychoses. H. A. Kelly, Baltimore.
116 Use of the Senses by the Surgeon. W. Van Hook, Chicago.
117 *Malignant Leiomyoma of the Uterus. M. W. Myer, St. Louis.
118 *Tuberculous Infections of the Peritoneum. W. H. Allport, Chicago.
119 *Spontaneous Rupture of Pyosalpinx into the General Peritoneal Cavity, Producing Acute Diffuse Peritonitis. C. W. Bonney, Philadelphia.
120 Ovarian Cyst with Twisted Pedicle Complicating Pregnancy—Operation. S. Rushmore, Boston.
121 Pitfalls in Urinary Diagnosis. B. Lewis, St. Louis.
122 Multiple Myxo-Cholesto-Lipoma. F. Proescher and E. W. Meredith, Pittsburg.
123 *Treatment of Diffuse Septic Peritonitis from Appendicitis in the First Twenty-Four Hours. R. S. Fowler, Brooklyn.

124 Apparatus for Proctoclysis. P. Wroth, Hagerstown, Md.
125 Complete Division of Common Duct at Junction with Hepatic and Cystic Ducts, Suture and Complete Repair of Injury. I. S. Stone, Washington, D. C.

114. **Resection of the Male Rectum.**—The technic employed by Lusk includes the use of the combined routes—Rotter's technic of sectioning the descended bowel through the posterior wound after first liberating it through the abdominal approach, and Kraske's position of vertical elevation of the hips with the patient in the dorsal decubitus for suture of the bowel ends, as well as the method Kraske employs in sacral resection of dividing the proximal segment of bowel above the tumor with interrupted cuttings as the stitches are placed.

115. **Postoperative Psychoses.**—Kelly maintains that postoperative psychoses seen often in childhood and the aged, occur also in women in the prime of life, most frequently between the ages of 35 and 45. Anesthesia, physical shock, the kind or severity of the operation are not effective causative agents. Infection, autointoxication, drug intoxication are important factors, but there are many psychoses entirely independent of them. Mild aberrations of a transitory nature are very common. An unstable nervous system, and especially undue anxiety and worry about the operation are the most potent factors in bringing about profound nervous sequelæ. Prognosis is favorable. Prophylaxis consists in quieting and reassuring the patient. In this connection the nurse is most important. Care should be taken to avoid any legal or forensic complications by frankly dealing with the family from the onset of the trouble.

117. **Malignant Leiomyoma of the Uterus.**—Myer records a case which seems to fulfill all essential requirements from both the clinical and pathologic standpoint.

118. **Tuberculosis of the Peritoneum.**—The apparent difference in the incidence of peritoneal tuberculosis in the male and female, Allport believes is apparent rather than real, and such difference as exists is due altogether to the inclusion of the female organs within the peritoneal cavity. The apparent differences in the form of peritoneal tuberculosis are due: (1) to differences in the location and structure of the organs involved; (2) to a recognition of the disease at various stages in its development. Pathologically, the disease has but one form, which unfolds itself along the same morphologic lines as in other parts of the body. Peritoneal tuberculosis is never primary. The most common avenue of entrance is the bowel; next, the lymph glands; next the female genitals. Bowel infection may be secondary to that of the peritoneum, and the female genitals may receive infection in the same retrograde manner. Gravity plays an important part in the spread of intraperitoneal tuberculosis. The same is true of diffusion by contact and continuity.

Temperature of a markedly febrile character is an indication of mixed infection; especially true is this of remittent fever. High leucocytosis and temperature following operative interference are favorable conditions, and indicate good resistance of the individual to the farther progress of the disease. In abdominal operations followed by prolonged fever and delayed convalescence, the possibility of existence of hitherto unsuspected tuberculosis should be borne in mind by the operator. All specimens removed at abdominal operations should be thoroughly inspected for tuberculosis. The theory that ascitic fluid has a protective, curative, opsonic, or otherwise salutary function is incapable of proof. In all cases in which recovery takes place, healing occurs after the resorption of the fluid and through the agency of active hyperemia and adhesions; the adhesion is the force which, here as elsewhere, delimits and excludes the morbid process from becoming a farther power for evil. Statistics, approved by the best modern opinions, show that simple incision with thorough evacuation of the fluid without drainage, increases by a very appreciable percentage the uncertainty and rapidity with which climate, hygiene and diet can effect a permanent cure.

Radical operations, such as curettage, erasion, resection, continued drainage—beneficial in joint surgery—should have no place, except as emergency measures, in dealing with the intraperitoneal lesions of tuberculosis. Drainage, he says, is a "snare of the devil" and is especially apt to be followed by serious and often fatal fecal fistula in the dry forms of tuberculous peritonitis. Statistics show conclusively, he asserts, that its practice leads to evils which are worse than the original disease.

119. **Rupture of Pyosalpinx.**—Bonney reports one personal case and reviews 44 cases recorded in the literature.

123. **Treatment of Diffuse Septic Peritonitis.**—Of the series of 167 cases of diffuse septic peritonitis from appendicitis operated on by Fowler at varying intervals following perforation, up to January, 1909, there have been but fifteen patients operated on within twenty-four hours of the onset. This series does not include any patient operated on for perforation of the appendix within a few hours of the perforation, in which event one finds an appendix congested to a variable degree, free or slightly adherent, a perforation usually in the distal half, with or without the escape of an enterolith, seropurulent fluid, malodorous or not, according to the germ present, moderate in amount and not under tension, a peritoneum which only in the neighborhood of the appendix showed slight change, perhaps hardly any injection of the peritoneal surface. Of such cases Fowler has operated on over 100 patients with no deaths.

Of the 15 patients with diffuse septic peritonitis, 9 were males, 6 were females; 4 were between the ages of 10 to 15; 6 were 15 to 20; 1, 20 to 25; 1, 25 to 30; 2, 30 to 35; 1, 35 to 40; 11 had had no previous attacks; 3, one previous attack; 1, three previous attacks; 15 were twenty-four hours in present attack when operated on; 15 were operated on by an oblique incision; 15 showed free pus under tension when the peritoneum was incised; in 13 the appendix was free, gangrenous and perforated; in 2, it was slightly adherent, gangrenous and perforated; in 14, the appendix was removed in the typical manner, and the stump inverted; in 1, the base was ligated; in 7, the peritoneal cavity was flushed with saline, in 3, with peroxid followed by saline; in 5, no irrigation was used; in 15 cases laparotomy sponges were used to keep back the intestines while removing the appendix; in every case these sponges, when removed were saturated with a purulent material and fibrinous exudate; in 7 cases a glass tube into the pelvis was used for drainage; in 1 case a rubber tube; in 3 cases wicking or gauze to the site of the appendix; in 2, vaginal drainage; in 2, no drainage; the average duration of operation was twelve minutes; in 15 cases the elevated head and trunk posture was employed; 13 patients were given fluids immediately on recovering from anesthesia; 2 were given nothing by mouth for twenty-four hours; 8 received saline enemata every four hours for four doses; 6 nothing by rectum; 1, Murphy irrigation. Average stay in the hospital twenty-eight days. All cases recovered.

Fowler concludes that patients with diffuse septic peritonitis from appendicitis operated on within twenty-four hours of the onset of the disease, i. e., before the peritoneum is infiltrated, recover, providing the primary focus is removed quickly without damaging the absorbing power of the peritoneum, irrespective of feeding or enemas, providing the absorbing power of the peritoneum is properly made use of.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

November 6

1 *Darwinism and Medicine. J. A. Lindsay.
2 Identity of British Ulcerative Colitis and Tropical Bacillary Dysentery. H. P. Hawkins.
3 The Alleged Heterogenesis in Ankylostoma Duodenale. R. T. Leiper.
4 Oriental Sore. R. M. Carter.
5 *Tuberculosis in Bombay. R. Row.
6 *Tuberculin Reactions in Skin and Eye. C. McNeil.
7 Disseminated Tuberculosis Treated with Marmorek's Serum. H. Hemsted.
8 Bacteriology and Vaccine Treatment of Common Colds. C. H. Benham.

1. **Darwinism and Medicine.**—That a general survey of the relation of Darwinism to the science and art of medicine is likely, in many ways to be salutary, is the belief of Lindsay. He says that it will certainly tend to breadth of view, to a philosophic appraisement of the factors with which we have

to deal, to a recognition of the great underlying laws and secular processes which are related to our art. It may, perhaps, act as a damper on enthusiasm when it is realized that evolutionary change is slow and only partially under control; but, if this be the truth, it is better to know and recognize it. Medicine will gain in stability and in influence, as well as in dignity, by being in close relation with the higher thought of the day. In some not unimportant particulars it may react on that thought. Disease becomes something more than a disagreeable and embarrassing fact when we realize how closely it is related to evolutionary processes, how vivid is the light it is capable of throwing on evolutionary law. It takes its place—temporary we may hope—in the eternal order.

5. **Tubercle in Bombay.**—From a number of observations of cases of phthisis under his own care for the last ten years, Row claims that when a patient shows any improvement, side by side with his clinical progress, one finds in his sputum characteristic changes in the tubercle bacilli, especially in the grouping, and making allowances for all the fallacies connected with the technic of preparing the specimens under exactly identical conditions, one cannot resist being struck with the constancy of these changes, which, stated in brief, are:

1. Characteristic grouping of the tubercle bacillus—instead of being diffuse and scattered, or at best in twos and threes, they group in masses of eight, ten, twelve or more bacilli, scattered here and there in the specimen coming under focus as the search is proceeded with—in addition to the singles, twos and threes, which appear to be fewer. 2. A gradual diminution of the number of the bacilli found in the sputum. 3. A morphologic change of the individual bacilli—the individual rods, which were at first solid, show more beading, erosion of edges, and thinning—an appearance of distinct degenerative change in the bacilli. 4. A very great diminution of even these degenerate bacilli, so that one observes a few granules here and there indicative of some bacilli or their products. 5. Loss of their virulence, as no result is obtained by inoculation experiments. Thus it appears that in the course of infection there is always a certain phase when agglutinins make their appearance, and these agglutinins are manifested by the groupings above referred to, and, *a priori*, Row was led to suspect the possible presence of these bodies or allied bodies in the tuberculous sputum, in the spleen, and the liver, where the partial caseating necrotic masses were so prominently noticed in guinea-pigs. The splenic and hepatic lesions above referred to appear to be formed as though by selection, the whole defensive machinery of the guinea-pigs being brought into activity mainly in these organs, where the poison and its reaction products, so to say, become concentrated during the course of infection. These considerations have led Row to attempt to isolate from these foci a material which, when acted on by blood serum of undoubtedly tuberculous patients, would in all probability demonstrate the presence of agglutinins. With this object in view, extracts were obtained (1) from tuberculous sputum, (2) caseating glands, (3) necrotic and partially caseous livers, and (4) caseating spleens of guinea-pigs; and from the large number of chemicals tried alcohol has been selected as being the best reagent for the purpose. After a series of trials, the extracts of the first three classes were rejected as being unsuited for the purpose in view, because a large admixture of substance other than the active body in question are taken up by the spirit, and these other bodies, especially fats, extractives, and possibly traces of albumose interfere with the reaction; caseating spleens afford the best extract, especially those spleens which show a maximum of caseating material and a minimum of true splenic structure. Although the general result of the serum reaction in cases of tubercle is positive, yet when using the splenic extract, Row has tested the value of the reaction by its giving negative results with malaria, enteric infection, dysentery, meningitis, bronchitis, and a few other septic conditions. Fuller details and the important bearings of these actions in the study of allied diseases are reserved for a further communication.

6. **Tuberculin Reactions in Skin and Eye.**—A series of 153 cases were tested by McNeil as to the skin reaction in the group of diseases of bone, lymphatic glands and joints. The reactions were very clear, either emphatically positive or negative. A large proportion of the cases of enlarged or suppurating neck glands gave positive reactions. The test was of great value in obscure joint conditions where the clinical diagnosis was doubtful, and especially in cases of slight but persistent joint disablement after injury. Perhaps the most significant group is that of the simple pleural effusions. Thirteen out of 14 cases gave a positive reaction. Of the cases of tuberculous peritonitis, three failed to react. They were all severe cases with great general prostration, and two of them have already proved fatal. The groups of tuberculous meningitis and general tuberculosis illustrate well how in very severe or general infections the test, like the ocular reaction, breaks down. Of the skin conditions, two were clinically tuberculous—lupus and tuberculous ulceration—and gave positive reactions. The remaining negative results were in cases of eczema. Numerous control cases taken from cases of lobar pneumonia, empyema, chorea, and other miscellaneous conditions, were all negative, with one exception.

In 78 cases the Calmette and v. Pirquet reactions were tried in the same patient. The v. Pirquet test was positive in 31 cases, it was negative in 47. In these 47 negatives the Calmette reaction was also negative in every case. It was positive in 21 of the cases in which the v. Pirquet was positive, but it failed to react in the remaining 10 cases in which v. Pirquet was positive. That is to say, out of a total of 78 cases, the Calmette test either coincided with the v. Pirquet, or contradicted it negatively. It did not contradict positively in a single case—that is, it never gave a positive reaction where the v. Pirquet was negative.

Lancet, London

November 6

9 *Darwinism and Medicine. J. A. Lindsay.
10 *Oxaluria and the Treatment of Calcium Oxalate Deposit from the Urine. R. Maguire.
11 Late Traumatic Subdural Hemorrhage: Traumatic Late Apoplexy. A. H. Miller.
12 *Starch Indigestion in Babies. E. Cautley.
13 *Lung Puncture. T. J. Horder.
14 *The Dyspepsia of Old Age. W. S. Fenwick.
15 Sinusitis Occurring as a Concomitant Complication of Influenza. R. N. Manwaring-White.
16 Tertiary Syphilis Terminating in Sudden Death from Abductor Paralysis of Vocal Cords. R. H. J. Browne.
17 Rapid Recovery in a Case of Trophoneurotic Anemia by Intramuscular Injection of Sodium Para-Aminophenylarsonate. T. W. Parry.

9. See Abstract No. 1.

10. **Oxaluria.**—Maguire is convinced that he succeeded in dissolving an oxalate calculus while existent in the higher urinary passages of a patient, and with removal of all the consequent symptoms. The patient, aged 44, passed through a period of great overwork, anxiety, and sleeplessness, and in consequence suffered from what he called "nervous dyspepsia." A year later, he placed himself under the care of a physician, who treated his dyspepsia, and later discovered a pronounced oxaluria—then, it is said, in the form of a dumb-bell deposit. Subsequent hematuria and severe pain in the right flank, extending to the right testicle, made it probable that a calculus had formed in the upper urinary passages of the right side, but several *x*-ray examinations failed to demonstrate this. The patient was advised to take alkaline waters and a diet mostly composed of vegetables. Toward the end of three weeks he passed a small stone which proved to be composed of oxalate of calcium, but his local symptoms were in no way relieved, his dyspepsia persisted and his general weakness, ill-health and loss of weight had increased.

It was then that Maguire saw the man. He made a diagnosis of (a) oxaluria from excessive production of calcium oxalate, this in turn being the result of disordered metabolism caused by the dyspepsia; and (b) an oxalate of calcium calculus, lodged in the right ureter. He prescribed absolute rest, as nearly as possible in the open air, with a liberal diet of white meat, two or three times a week, a little champagne, and a medicinal course of dilute nitric acid and strychnin with digestive ferments at the beginning of each meal. An aloes and nux vomica pill each night and a dose of Carlsbad salts once a week were ordered to regulate the bowels. The symptoms, apart from those of calculus, very soon lessened in severity. The symptoms of stone, however, were as severe

as before. It therefore seemed to Maguire feasible that if one could increase the acid phosphate of sodium in the urine by giving large quantities of the salt by the mouth, one might possibly at least dissolve off some of the spikes of the oxalate calculus and so facilitate its passage. Maguire then ordered, at first, half an ounce, then one ounce, and very soon two ounces of acid phosphate of soda, to be dissolvel in 100 ounces of distilled water and the solution drunk at frequent intervals during the twenty-four hours, but, so far as possible, remote from meal times. For half an hour or so after each dose there was considerable uneasiness in the abdomen, mostly from flatulence and a feeling of distention, but a little essence of ginger added to the solution relieved this to some extent, and it was never unbearable considering the end in view. The acidity of the urine increased about half an hour after taking each dose and the small amount of calcium oxalate still being deposited seemed always to be diminished in the urine passed at this time. The oxalate deposit disappeared entirely in about ten days. The blood in the urine gradually diminished and disappeared in about three weeks. The pain lessened gradually, but in six weeks there was no sign or symptom of stone; the patient could walk from ten to twelve miles and take severe gymnastic exercise without the slightest discomfort, nothing abnormal could be detected by the rectum, and the man felt well and in his usual spirits.

12. **Starch Digestion in Babies.**—A diastasic ferment is secreted by the salivary glands and pancreas of new-born infants and even before birth. Its amount and activity are slight in the first few weeks of life and after that rapidly increase. The glands, notably the pancreas, can be trained by means of a starch diet to the secretion of an increased amount of the amylolytic ferment. There is no inherent reason why this training should not be begun shortly after birth in the case of the bottle-fed infants instead of waiting until the child has attained the age of six months, as so commonly advised on purely theoretical grounds. Practical experience has shown that the usual barley water contains about 2 per cent. of starch. If mixed with an equal quantity of milk there will be only 1 per cent. of starch in the mixture. Such an amount is non-injurious and almost certainly is beneficial, as it encourages the growth of lactic acid. These organisms are of undoubted advantage in the prevention of the growth of proteolytic bacteria.

If a starchy food is used in the first two weeks of life it is advisable to begin with a milk mixture which will not contain more than 0.5 per cent. of starch and to gradually increase the amount as the child grows older. Indeed, at any age when a starchy food is first given it should be in very weak solution and slowly strengthened up to as much as 3 to 5 per cent. If the stools become very acid or if they give a distinct starch reaction, the percentage of starch in the diet must be reduced. Special care must be paid to these considerations in the first two months of life because of the deficiency of salivary secretion. Further investigations may possibly show that this is a point of little importance as the pancreatic secretion may be sufficient in quantity and activity. The evil effects of starch in early life are due to (a) excess; (b) its administration in the form of a more or less insoluble emulsion instead of a soluble food; and (c) the substitution of starch for the necessary protein, fats and salts. In other words, the mischief results from deficiency of necessary proximate principles of diet rather than from the presence of starch.

13. **Lung Puncture.**—In actual practice, a diagnostic puncture of the lung, according to Horder, may be made under two conditions: (1) if a pleural effusion is suspected and the result of the puncture negatives this; or (2) if no fluid is suspected in the pleural sac, but the lung is deliberately punctured for the express purpose of discovering the nature of a disease process within the lung itself. The material obtained is no less valuable in the first than in the second of these two conditions. The indications for lung puncture will vary somewhat with the desire of the physician for accurate knowledge with regard to the condition of the patient. In brief, it may be said that the puncture is indicated: 1. In any case yielding signs of consolidation of the lung, in which careful examination of the sputum fails to reveal the nature of the disease. It is, perhaps, pushing the value of "ocular demonstration" rather far to say that the lung puncture is indicated in a straightforward case of lobar pneumonia, even when there is no sputum for examination. But it should certainly be undertaken in any such case if the desired clinical course is departed from in any way to the prejudice of the patient. The puncture will frequently reveal the existence of a mixed infection (e. g., *B. influenzæ* and pneumococcus) when this is not suspected. 2. In abscess it is useful to obtain a specimen of pus from the actual seat of suppuration, for thereby a knowledge of the causal microbe is gained, often a matter of great difficulty or impossibility when dealing with the sputum. 3. In bronchiectases the same comments holds. The mode of performing the puncture follows exactly that of exploration of the pleura. Horder has punctured the lung for diagnostic purposes in some 14 cases. He suggests that it may possibly be found of service in suspected cases of acute pulmonary tuberculosis, in which condition sputum is so commonly absent.

14. **Dyspepsia of Old Age.**—Fenwick's investigations seem to indicate that out of every 100 cases of chronic dyspepsia in persons over 65 years of age, 66 are secondary to organic diseases of some important organ of the body, while the remaining 34 owe their symptoms to a progressive degeneration of the secretory structures of the stomach and intestines. In the former class the disorder of digestion usually takes the form of a chronic gastritis due to disease of the kidneys, prostate, heart, lungs, liver, pancreas, chronic gout or inefficient mastication, while in about 7 of the 66 cases, or in 10.6 per cent. of the entire number, long-continued hypersecretion, due to chronic ulcer in the vicinity of the pylorus, gall-stones, or diseased appendix is the cause of the constant indigestion.

Medical Press and Circular, London

September 29

18 *Intestinal Obstruction. J. R. Morison.
19 Recurrent Hemoptysis in the Non-Tuberculous. J. Hay.
20 Natural History of the Common Flea. G. Millian.
21 Quacks, False Remedies, and the Public Health (continued). D. Walsh.

October 27

22 Hypertrophy of the Prostate and its Treatment. Professor Pauchet.
23 Six Consecutive Cases of Appendicitis Operated On. S. J. Ross.
24 Need for Legislation in Regard to Anesthetics, and the Lines on Which It Should Take Place. F. W. Hewitt.
25 Quacks, False Remedies, and the Public Health (continued). D. Walsh.

18. **Intestinal Obstruction.**—The first case reported by Morison was one of intestinal obstruction due to a malignant stricture in the splenic flexure of the colon with hypertrophy and distention of the cecum and colon, proximal to the stricture, the contents being actively virulent in consequence of colitis and retention above it. No material benefit followed medical treatment. Following a preliminary cecostomy, half of the transverse and descending colon with a corresponding portion of mesentery was excised with the growth, the ends of the bowel were closed by sutures, and a large lateral anastomosis was established by sutures between the remains of the transverse and descending colon. Fourteen days later, after free irrigation of the colon, the cecostomy opening was closed and twelve days later the patient left the infirmary with his wounds healing and feeling well. The second case was one of acute intestinal obstruction from blocking of the small intestine, with strangulation of a considerable area of the gut. The obstruction was caused by something fixing acutely and kinking the ileum on the outer side of the cecum and ascending colon, and on separating this adhesion pus escaped. After cleaning away the pus, a gangrenous perforated appendix was turned out of the abscess cavity and excised. Recovery was subsequently uninterrupted.

Clinical Journal, London

October 27

26 Lymphadenoma of Mediastinum. W. P. Herringham.
27 Functional Disorders of the Stomach and Intestines; Their Diagnosis from Organic Disease, and Treatment (concluded). S. Martin.
28 Use of and Indications for Electrotherapy in Gynecologic Affections. J. C. Webb.

Indian Medical Gazette, Calcutta

October

29 Recent Cholera Outbreak Among the Nurses of the Presidency General Hospital, Calcutta. R. Macrae.
30 Smallpox. J. C. S. Vaughan.
31 Increased Intraocular Tension Encountered in Cases of Epidemic Dropsy. F. P. Maynard.
32 An Indian Screw-worm. R. L. Patterson.

Bulletin de l'Académie de Médecine, Paris

October 19, LXXIII, No. 33, pp. 193-203

33 *Phototherapy of Laryngeal Tuberculosis. A. Nepveu and H. Hallopeau.
34 Two Cases of Congenital Fissure of the Face. (Coloboma facial.) E. Kirmisson.

33. **Phototherapy of Laryngeal Tuberculosis.**—Nepveu utilizes for the purpose an electric arc light with quartz reflectors and a quartz water-cooling device. He precedes the sitting by spraying the region with a solution of cocain and adrenalin, which diminishes the reflexes and congestion and thus enhances the action of the chemical rays on the tissues.

Presse Médicale, Paris

October 23, XVII, No. 85, pp. 745-752

35 *Tuberculosis of Tendon Sheaths. (La forme hypertrophique pseudonéoplasique de la tuberculose des gaines tendineuses.) E. Forgue and G. Massabuau.
36 *Operative Treatment of Hypophysis Tumor in Case of Acromegaly. P. Lecène.
37 Anatomy of the Wrist. (La région cubitale du poignet.) L. Bruandet.

35. **Tuberculous Process in Tendon Sheath.**—A domestic in a family in which there was a consumptive cut her thumb with a table knife and a process developed in the wrist with specific tuberculous lesions accompanying the connective-tissue reaction of an apparent myeloma. Recent research has demonstrated that a number of connective-tissue reactions, whose structure simulates that of certain tumors, are in reality tuberculous lesions. Gougerot has recently demonstrated this for a lymphadenoma, a lymphosarcoid, a fibroma and a spindle-celled sarcoma, although the bacteriologic proof is still lacking in some.

36. **Hypophysis Tumor.**—Lecène's patient was a man of 38, presenting the clinical picture of typical acromegaly, with epileptiform manifestations and impaired vision. A tumor was found in the hypophysis and was apparently successfully removed, but sudden fatal collapse occurred on the thirty-sixth day after the transsphenoidal operation.

Semaine Médicale, Paris

October 27, XXIX, No. 43, pp. 505-516

38 *Diagnostic Importance of Albuminuria in Meningeal Hemorrhage. G. Guillain and C. Vincent.

November 3, No. 44, pp. 517-528

39 The Leucocytes in Disease. (Vitalité, résistance et activité des globules blancs dans les maladies.) C. Achard.

38. **Albuminuria as Symptom of Meningeal Hemorrhage.**—In the case described, a woman of 54 experienced sudden malaise with general chilliness and severe headache, but no loss of consciousness, merely some torpor. In the liter and a half of urine voided during the twenty-four hours, 20 gm. of albumin per liter were found, but there was no tendency to edema or *bruit de galop*, although there was slight fever. Lumbar puncture revealed a typical and abundant meningeal hemorrhage; all the symptoms gradually subsided and by the ninth day there was no trace of albuminuria. In none of the similar cases on record was the amount of albumin over half this proportion. The discovery of large amounts of albumin in the urine without other signs of nephritis may aid in the differentiation of meningeal hemorrhage. In a second case Guillain based the diagnosis on this sign alone, the autopsy confirming it.

Archiv für Verdauungs-Krankheiten, Berlin

October, XV, No. 5, pp. 557-670

40 Influence of New Cholagogs on Secretion of Bile. (Experimentelle Studien über die Beeinflussung der Gallensekretion durch neuere Cholagoga.) F. Eichler and B. Latz.
41 *Deficiency of Hydrochloric Acid in the Stomach. (Statistisches über Salzsäuremangel im Magen.) G. Kelling.
42 Gastric Mucosa Cyst in the Esophagus. (Eine mit Magenschleimhaut versehene Cyste des Oesophagus.) A. Staehelin-Burckhardt.
43 Two Cases of Severe Chronic Enterospasm. R. Rinne.
44 *Vegetarian Diet of Japanese Monks. (Ueber die absolut vegetarische Ernährung japanischer Bonzen.) G. Yukawa.

41. **Prevalence of Hypochlorhydria.**—Kelling expatiates on the necessity for collecting statistics in regard to the prevalence of conditions in the stomach connected with the absence of free and combined hydrochloric acid, and presents the findings in this respect in 4,937 cases of various stomach affections as his contribution to the subject. The list includes 192 men and 189 women with unquestioned ulcer, and 3,147 with stomach disturbances on a basis of neurasthenia or anemia: 1,729 men with hydrochloric acid and 395 without, and 900 women with and 216 without. Out of the 3,147 in the second group, 16.5 per cent. had no free hydrochloric acid in the stomach after the Ewald-Boas test breakfast—every seventh man and every fifth woman. In the 622 cases of gastric carcinoma, no hydrochloric acid was found in 462, while one in each four had free acid. These findings in regard to the acidity did not seem to be in any way proportional to the size of the cancer. He has encountered only two instances of chronic gastritis with ultimate gastric cancer, and thinks that chronic atrophic gastritis can be said almost to exclude cancer, while a peptic ulcer invites it. In 8 cases of pernicious anemia, none of the patients had free acid, but one had a small gastric carcinoma. These findings have confirmed him in the view that pernicious anemia, like leucemia, belongs in the group of tumor diseases, the essential trouble being a proliferation of erythroblast-forming cells. In 254 cases of gall-stone trouble, 30 per cent. of the patients had no free acid. This frequent lack of acid with gall-stones throws light on the cases in which lactic acid is found but no cancer. The lack of hydrochloric acid and the stagnation of stomach content favor the production of lactic acid as the duodenum is compressed by inflammatory processes around the gall-bladder. In 36 cases of gout and kidney stones, no free acid was detected in 33 per cent., and none in 38 per cent. of 21 diabetics, in 40 per cent. of 195 cases of tuberculosis and in 22 per cent. of 119 cases of typical migraine. Hydrochloric acid was found in all but 3 of 21 cases of mild chronic nephritis, and in all but 12 of 60 cases of old syphilitic infection. No special influence from helminths was discernible except with tenia, the figures showing a slightly larger proportion of hypochlorhydria among those who had had a tenia; it is possible, he suggests, that subacidity predisposes to lodgment of a tenia. The above data seem to indicate that in certain infectious diseases, such as tuberculosis, in cancer and in metabolic affections, certain toxins circulating in the blood have an injurious action on the glands of the stomach, which also seems to be the case with gall-stone disturbances. In regard to neurasthenic hypochlorhydria, he is inclined to accept the nervous weakness as responsible for the stomach disturbances by the resulting disturbances in molecular change and the consequent abnormal metabolic products. It is noteworthy that many of these patients suffer most from their stomach when they are especially fatigued. It is possible that the fatigue products circulating in the blood irritate the glands of the stomach. The irritation stimulates a healthy gland to increased functioning and hypertrophy, but it injures and finally destroys a congenitally weak gland. Hyperacidity and hypoacidity may thus proceed from the same cause, and the former may blend into the latter as the glands become exhausted. Many of these patients with hypoacidity are benefited by sodium, probably from suggestion, as they remember former days when sodium bicarbonate did relieve. These cases confirm the saying that gastric achylia cannot be diagnosed from the patient's complaints; the stomach contents must be directly examined. He was unable to discover any characteristic nervous symptoms for congenital weakness of the glands of the stomach. Collection of regional statistics in regard to hypochlorhydria may throw more light on the subject. He remarks that the only contraindications to the use of the stomach tube are aneurism of the aorta, extensive gastric hemorrhage less than three weeks before, and varices in the esophagus such as frequently accompany cirrhosis of the liver. These varices bleed readily, and consequently he never introduces the stomach tube without previously carefully investigating the heart and liver.

44. **Vegetarian Diet of Japanese Monks.**—Yukawa gives sixty-five tables of the various metabolic findings in a num-

ber of Japanese vegetarians, especially 12 monks who abstain from a flesh diet in any form. Over 46 per cent. of 200 elderly persons examined were found to have subsisted for decades and were apparently thriving on an exclusively vegetable diet, mainly rice. The average Japanese diet in the groups of farmers examined represented 2,877 calories or 55.6 calories per kilogram. The 12 priests, the subjects of the special metabolic research, had been living a cloistered life for from 15 to 55 years. Their diet represented merely 1,766 calories or 36.92 calories per kilogram. All were healthy and strong.

Berliner klinische Wochenschrift

October 18, XLVI, No. 42, pp. 1877-1920

45 Negative or Unfavorable Results of Antiferment Treatment of Acute Suppurations in Infants. (Antifermentbehandlung eitriger Prozesse beim Säugling.) M. Klotz.
46 Proteolytic Ferments in Infants' Stools. (Proteolytische Fermente in den Säuglingsfäces.) F. Czekkel.
47 Regeneration of the Suprarenals. (Regeneration der Nebenniere.) A. Carraro and E. Kuznitsky.
48 Nature of Serum Antitrypsin. K. Meyer.
49 *Transillumination of Fundus of Eye by Way of the Throat, etc. (Zum Einblick in das Innere des Auges bei getrübten brechenden Medien.) C. Hertzell.
50 *Painful Cystitis. (Cystitis Dolorosa.) C. Posner.

October 25, No. 43, pp. 1921-1964

51 *Emotional Injury from Horror as Industrial Accident. (Furcht und Grauen als Unfallursache.) L. Lewin.
52 Tuberculosis in Children and Immunity. (Kindheits-Tuberkulose und Immunität.) Ritter and Vehling.
53 *Adrenalin as Antidote to Strychnin. W. Falta and L. Jvcovic.
54 Alleged Perfect Sterilization of Skin with Iodid without Preliminary Washing. (Neue Sterilisierungsmethode der Haut bei chirurgischen Operationen.) A. Grossich.
55 Diagnosis and Treatment of Incipient Tuberculosis. A. v. Sokolowski. Commenced in No. 42.

49. **Transillumination of Eye by Way of the Throat.**—Hertzell says that when there is any tendency to opacity in the lens it is difficult to inspect the fundus of the eye from without, but, with the light at the back, a clear oversight is obtained. The difference is as great as between trying to look from the street through a lace curtain into a room during the day and at night after the room is lighted up.

50. **Painful Cystitis.**—Posner declares that there is generally ulceration in every case of painful cystitis, the conditions in many cases being remarkably like those of round gastric ulcer. The pain in the majority of cases is due to ulcer, tuberculosis or tumor, and treatment varies for each. In the tuberculous form, a primary kidney process is probably the source of the bladder trouble, but whether this is the case or not, general measures should be instituted, including prudent general tuberculin treatment. There is no form of local treatment of a tuberculous bladder process that does not aggravate the disturbances. In the painful variety, the bladder will not tolerate even the ordinary technic of copious irrigation. The organ is actually a contracted bladder by this time, and has a capacity of only a few cubic centimeters. A cystitis which becomes aggravated under treatment with silver nitrate, instead of showing a change for the better, is strongly suggestive of tuberculosis. Corrosive sublimate may have a favorable action and use of small amounts of a 6 per cent. solution of carbolic acid have been recommended by Rovsing and is justifiable as a last resource. A mere incision into the bladder may have a favorable influence in some cases. The conditions for treatment are a little better with nontuberculous ulceration; silver nitrate instillations may induce a complete cure if applied directly to the lesion with the aid of the cystoscope. Radical removal of the ulceration may be considered unless the lesion has progressed to an actual contracted kidney. In case of inoperable tumor, relief may be obtained sometimes from injection into the bladder of warm olive oil. If mineral waters are permitted they should be restricted to small amounts. Physical and dietetic measures are of the utmost importance, especially local application of heat, long sitz baths and avoidance of condiments. Milk is the best beverage; it may be evaporated to half its volume to prevent too much diuretic action. Although bed rest is favorable, its advantages are usually counterbalanced by those of out-door freedom, eventually with the use of a urinal, and Posner pleads for technical improvement of the urinals in vogue as they have too many drawbacks at present.

51. **Horror as Cause of Industrial Accident.**—A miner was ordered to disinfect with lysol the putrefying corpse of a mate who had been crushed in the mine a few days before. The miner developed thereafter a condition of mental depression incapacitating him for work.

53. **Adrenalin an Antidote to Strychnin.**—In this communication from von Noorden's clinic at Vienna, Falta reports experimental research on guinea-pigs and rabbits in which injection of adrenalin seemed to neutralize completely several times the fatal dose of strychnin. This occurs whether the adrenalin and strychnin are mixed and injected together or injected at different points of the body, only in the latter case the adrenalin should be injected a minute before the other. The experiments on frogs demonstrated that the action of adrenalin as an antidote is not due to delay in absorption, but seems to be a biologic process of different nature. Experiments are now under way to determine whether it possesses the same powerful action as an antidote in respect to diphtheria and other toxins.

Correspondenz-Blatt für Schweizer Aerzte, Basle

October 15, XLIX, No. 20, pp. 689-720

56 *End-Results of Nephrectomy in 100 Cases. (Ergebnisse einer Serie von 100 Nephrektomien.) H. Wildbolz.
57 Antiferment Treatment of Acute Suppurations. (Antifermentbehandlung akut eitriger Prozesse.) S. Stocker.

56. **Experiences with Nephrectomy.**—The kidney was removed on account of tuberculosis in 90 of the 100 nephrectomies reported by Widbolz. Once convinced of the integrity of the other kidney, he did not hesitate to remove the tuberculous organ even when the general condition was extremely bad, and the results were favorable. His mortality was 4 per cent., but only two of the chachectic patients succumbed, one to advanced myocarditis and the other to uremia, as the other kidney was involved in the tuberculous process; the contracted condition of the bladder had rendered functional tests impossible. Another patient succumbed to pulmonary embolism ten days after the nephrectomy, and a thrombus was found in the renal artery. The only other fatality was in a patient with paralytic ileus a week after nephrectomy for hypernephroma. The paralysis of the bowel may have been due to local trauma of the adjacent colon or to injury of the bowel from the pressure of the hard cushion pushed under the patient to raise the field of operation. He noticed that postoperative meteorism was more frequent when the patients had been purged with a single large dose of castor oil than when smaller amounts of some milder purgative had been given for three days before. He uses ether anesthesia. The ordinary iodoform application after an operation on the tuberculous knee in two patients with a simultaneous tuberculous process in one or both kidneys caused such disturbances that the patients rapidly succumbed to iodoform intoxication, although only a comparatively small amount of iodoform had been used. He has never had a mishap from trusting too implicitly to devices for intravesical segregation of the urine, but states that he knows of a neighboring surgeon who had four mishaps in one year from this cause. In two of the cases the mistake was not discovered until after the sound kidney instead of the diseased one had been removed. In the two other cases the kidney was incised before the contemplated removal, showing the mistake, and the other kidney was then removed with no further damage except the entirely useless incision in the sound organ. In one of Wildbolz' cases intravesical segregation had never given decisive information as to whether the evident renal tuberculosis was unilateral or bilateral. After eight years of the trouble, catheterization of the ureters showed that the process was confined to one kidney and nephrectomy was followed by complete recovery. As a rule the tuberculous process in the kidney causes no disturbance until the bladder becomes involved, but occasionally the kidney process may simulate colic from renal calculi. In two cases in his experience a tuberculous process in one kidney was associated with calculi in the other, the patients recovering after nephrectomy and pyelotomy of the remaining kidney. The tuberculous kidney process may also attract attention by symptoms suggesting appendicitis when the right kidney is involved. One of his cases is peculiarly instructive: For ten years the patient had suffered from frequent colic in the right kidney region; then catheterization of the ureters disclosed pyonephrosis of the left kidney, the right being

apparently normal. No tubercle bacilli were found. After removal of the diseased left kidney, found totally degenerated and with two stones in the pelvis, all disturbances ceased, including the right colics and the gastrointestinal disturbances which had persisted for years. In another case a kidney was found totally destroyed by a tuberculous process which had caused no disturbances whatever, the tumefied kidney being a casual discovery when the patient consulted a physician on account of sterility.

Deutsche medizinische Wochenschrift, Berlin

October 28, XXXV, No. 43, pp. 1865-1904

58 Allowing Patients to Get Up Early. (Weitere Erfahrungen über frühzeitiges Aufstehen Laparotomierter zur Sicherung und Abkürzung des Heilverfahrens.) H. Kümmell.
59 Importance of Antitrypsin in Human Blood Serum for Diagnosis and Prognosis. (Bedeutung des Antitrypsingehaltes im menschlichen Blutserum.) G. Jochmann.
60 Serology of Little Help for Infant Feeding. (Serologische Untersuchungen zur Theorie der Säuglingsernährung.) C. T. Noeggerath.
61 Comparison of Blood-Pressure Findings with Palpation and Auscultation. (Vergleichende Blutdruckmessungen mittels der palpatorischen und auskultatorischen Methode.) P. Sterzing.
62 Detachment of Rectum in Fracture of Pelvis. (Ausreissung des Mastdarms bei Beckenringfrakturen.) P. Harrass.
63 Incarcerated Epigastric Hernia without Protrusion. (Zur Lehre von der Hernia lineae albae incarcerata.) M. Sebba.
64 *Facilitation of Childbirth by Non-Operative Measures. (Ueber Erleichterung der Geburt durch nicht operative Verfahren.) M. Samuel.
65 Double Vagina and Uterus. (Verdoppelung des Uterovaginalkanales mit Atresie und Pyokolpos der rechten Scheide.) Durlacher.

64. Non-Operative Measures to Facilitate Childbirth.—Samuel expatiates on the importance of various measures which may permit delivery without the necessity for operative intervention, otherwise apparently imperative. Besides the Walcher posture, which often proves effectual in enlarging the pelvic inlet, he advocates a position which enlarges the outlet and thus frequently renders operative delivery unnecessary. The woman squats, but the squatting is not symmetrical; the two thighs do not press equally on the abdomen. The woman sits almost on one heel, the foot resting on its toes, while the other foot is flat on the floor, both thighs being flexed and both knees. The hands clasp the knees, permitting a firm support to aid in straining. This position, he says, was recommended by A. F. A. King to correct transverse presentation by the thigh pressure on the abdomen. The thigh of the posterior foot presses low down on the head, forcing it from the iliac fossa into the pelvic brim, while the other thigh presses high up on the breech end of the fetus. (See THE JOURNAL, May 25, 1908, page 1809.) Samuel has found that this squatting posture has further a most effectual influence in enlarging the outlet of the pelvis while it contracts the inlet, and is thus a valuable aid to delivery when the head or breech is low in the pelvis. It not only enlarges the outlet but renders it possible for the woman to take better advantage of the labor contractions, while it has the additional effect of greatly reducing the pains of labor. When the head is low down the Kristeller manipulation may also prove useful; that is, pushing the head along over the floor of the pelvis during a labor contraction, with both hands on the fundus. Not until these measures have failed should operative intervention be considered. King states that if the woman is unable to squat, the thigh pressure on the abdomen can be obtained by manipulating the legs, artificially flexing the thighs in the position as if the patient were squatting.

Medizinische Klinik, Berlin

October 17, V, No. 42, pp. 1579-1616

66 Pathogenesis and Treatment of Eclampsia. P. Baumm.
67 Operative Treatment of Xerosis of the Corneal Conjunctiva. Libansky.
68 Blue Arc Light in Surgery. (Therapeutische Verwendung des blauen Bogenlichtes, bes. in der Chirurgie.) E. Moser.
69 Autolytic Processes in Tumors. F. Blumenthal, E. Jacoby and C. Neuberg.

October 24, No. 43, pp. 1617-1652

70 *Laryngeal Catarrh. (Der sogenannte und der wirkliche Rachenkatarrh.) J. Fein.
71 Importance of Penile Papillæ. (Bedeutung der "Papillen" der Corona glandis.) A. Buschke.
72 Functional Treatment of the Injured in Industrial Accidents. (Zur "funktionellen" Therapie Unfallverletzter.) A. Bum.
73 *Carcinoma and Gastric Achylia. W. Jungerich.

70. Treatment of Laryngeal Catarrh.—Fein remarks that there is scarcely any other medical term which is so persistently misused as "laryngeal catarrh." Every sensation, hoarseness, increased secretion, etc., in the throat and an abnormal condition anywhere in the neck is called laryngeal catarrh and treated as such or borne with resignation as "catarrh" is popularly supposed to be incurable. It is often forgotten that the throat is the passageway for the secretions from the lungs, bronchi and trachea, and for the secretions from the nose, as also for the gases and fluids from the stomach. He reviews the different conditions from these various causes which are accepted as manifestations of laryngeal catarrh when in reality the source is remote. When the affection is demonstrated to be actually an acute catarrhal condition in the rear wall of the throat, if the symptoms are annoying scraps of ice may be placed on the back of the tongue, not swallowed. Hard and highly seasoned food should be avoided and the patient may sip occasionally a little tepid mucilaginous fluid. The throat may be sprayed with an emulsion of liquid petrolatum and acacia, to which a few drops of turpentine, eucalyptus or peppermint oil may be added with a little cocain or cherry laurel water in case there is much pain. As patients have so much confidence in gargles, he orders a 1 per cent. solution of potassium chlorate, with a wet compress around the neck at night, but for acute conditions denounces mechanical measures of any kind, especially the use of the camel's hair brush. In chronic catarrh the differentiation must be left to the specialist, but, once differentiated, the general practitioner can, as a rule, continue the treatment ordered.

73. Gastric Achylia and Cancer.—Jungerich presents evidence to show that there does not seem to be any connection between gastric achylia and cancer; the fear that the former prepares the soil for the latter is unfounded according to present testimony. In his own experience he has had thirty-two patients over the age of 40 with gastric achylia since 1899, some of them with a history of achylia for from twelve to thirty years, and yet cancer is not known except in two patients who succumbed to a cancer in the pancreas or sigmoid flexure. The other patients are still in comparatively good health and weight, the appetite good when the dietetic regulations are observed. He has also investigated the previous history in 50 cancer cases, all in private practice, and was unable to find any evidence speaking for the existence of gastric achylia before the first signs of the cancer became apparent. The malignant disease proved fatal in one or at most in two years. He presents in tabulated form the details of his group of 32 achylia patients who have been in his care at any time since 1899.

Münchener medizinische Wochenschrift

October 19, LVI, No. 42, pp. 2146-2200

74 *Viscosity, Hemoglobin and Albumin Content of Child's Blood. (Viskosität, Hämoglobin- und Eiweissgehalt des kindlichen Blutes.) J. Trumpp.
75 Radium Treatment of Cancer. (Radiumbehandlung der Bösartigen Geschwülste.) A. Caan.
76 *Tendency to Thrombosis: "Thrombophilia," and Allowing Patients to Get Up Early after Childbirth and Laparotomies. (Ueber "Thrombophilie" und das Frühaufstehen Wöchnerinnen und Laparotomierten.) F. Mendel.
77 Influence on Heart Action of Four-cell Electric Baths. (Einfluss der sinusoidalen Vierzellenbäder auf die Herzarbeit.) E. Veiel.
78 *General Anesthesia with Dammed Circulation. (Erfahrungen mit Narkosen bei künstlich verkleinertem Kreislauf.) K. Hörmann
79 Special Muscular Connection Between Superior Vena Cava and Bundle of His. C. Thorel.
80 *Nephritis. (Aus dem Gebiete der Nephritis.) L. Casper.
81 Graphic Methods of Recording Heart Sounds. (Uebersicht über die graphischen Methoden zur Registrierung der Herztöne.) M. Seddig.
82 *Case of Pregnancy Blindness. (Amaurose in der Schwangerschaft.) K. Himmelheber.
83 Aneurism and Murmurs in Pulmonary Artery. F. Reiche.

74. The Viscosity of the Blood.—Trumpp has been making a special study of the viscosity and proportion of hemoglobin and albumin in the blood of children. He examined the blood of 152 children and 7 parturients and of numerous animals in the slaughter-house. His article is a contribution to the infant science of "viscosimetry," which he thinks is destined

to prove an important aid for diagnosis and prognosis and possibly a guide to treatment in certain affections. It is evidently an important factor in the solution of many scientific questions. The blood showed most viscosity in a new-born infant in blue asphyxia, 12; the lowest figures, 2.1, in a child with splenic anemia. The unusually high viscosity in the acute stage of alimentary intoxication attracted attention, the figures representing the viscosity growing smaller as the trouble was corrected. These findings confirm the concentration of the blood in alimentary intoxication which Reiss determined by the refractometer. The average viscosity of the blood in children is about 3.65; in infants from 3.2 to 3.6, and in healthy children between 7 and 13, the average is between 3.5 and 4.1. The average in adults, according to Hess, is 4.5. There did not seem to be any connection between the viscosity and the proportion of hemoglobin, but carbon dioxid increased the viscosity.

76. **Prevention of Postoperative Thrombosis.**—Mendel applies the term "thrombophilia" to a predisposition to formation of thrombi which some patients seem to display—the exact reverse of hemophilia. In one such case in his experience a previously healthy woman had phlebitis during the puerperium and since then has developed thrombophlebitis with every intercurrent infection since, once during influenza and once with simple tonsillitis. A tendency to eczema seems to accompany this thrombophilia. In another case thrombosis developed after a trauma of the foot and recurred during attacks of influenza and also in the inferior mesenteric vein during a catarrhal affection of the large intestine. After subsidence of the colics the stool contained traces of blood for weeks, but there were no objective findings otherwise except tenderness of the entire colon. The patient recovered gradually, but only 6 of the 60 similar cases on record terminated in recovery. The integrity of the heart and large vessels confirmed the non-existence of an embolus; the favorable outcome was probably due to the fact that the inferior instead of the superior mesenteric vein had been involved. These and other cases in his experience confirm the assumption of an infectious process in the wall as an indispensable factor in thrombosis. The thrombosis in these cases has generally been accepted as a casual complication of traumatic inflammation, but Mendel regards it as a sign of abnormal constitution of the blood which reacts to any local or general infection with the formation of thrombi. Interference with the circulation does not seem to be much of a factor in the thrombosis, but at the same time the limb should be raised to prevent extension of the process. Allowing patients to get up early after laparotomy or delivery will not prevent the development of thrombi in a predisposed venous system. No proof has been offered to date that thrombosis and embolism are less frequent when the patients are allowed to get up early. On the other hand, it must predispose to embolism especially when there is a tendency to abnormally rapid coagulation in the blood.

78. **General Anesthesia with Part of the Circulation Shut Off.**—Hörmann reports experiences with Klapp's method of damming the circulation described in THE JOURNAL, Oct. 19, 1907, p. 1408. Hörmann has applied this method in 50 cases. Much less of the anesthetic is required, he asserts; the patient rouses rapidly, while the blood that has been shut off, when released, serves as a fresh supply which stimulates the nerve centers, warding off asphyxia by this autotransfusion in case of impending paralysis of the respiratory center. The only contraindications are varicose veins and arteriosclerosis. No by-effects were observed and the technic is the simplest possible, the aim is to shut off from the general circulation the blood already in the limbs. This is done by applying an Esmarch bandage just before the anesthesia is given. Only the amount of blood normally in the limb is thus dammed, without congestion or expulsion of any of it. The bandage must shut off the circulation completely. (THE JOURNAL mentioned experimental research confirming the theoretic and clinical data on which the method is based: Nov. 21, 1908, p. 1826, and Jan. 2, 1909, p. 84.) Hörmann compares in three tables the consumption of chloroform and ether in several series of operations showing that with the circulation thus sequestrated only about half as much of the chloroform was required as without it. He always makes a subcutaneous injection of 0.01 gm. morphin one hour before the operation. The chief advantage of the method, however, is that in case of threatening mishap from the anesthesia, by removing the bandage the fresh blood streams back and averts all danger of further trouble. As a rule, only 15 gm. of chloroform were needed, given rapidly at first and then followed with ether, an average of 55 gm. ether being required for major operations.

80. **Nephritis.**—Casper calls attention principally to two special forms of nephritis, a chronic hematuric variety without albumin, tube-casts, edema or other signs of disturbances in the circulation. Hemorrhage in one or the other kidney alternately seems to be the only trouble, the urine in the intervals, which may be months or years, being apparently normal. In the other variety the pathologic changes are so minute sometimes that they escape discovery at autopsy, but a circumscribed nephrosis is responsible for the hemorrhages. This condition is called by the French "*néphrite parcellaire*," but, Casper asserts, it is certainly not a nephritis. In these cases the hemorrhage occurs always from the same kidney. It is generally more profuse and persistent than the above hematuric nephritis; clots collect in the bladder and may clog the outlet, the kidneys are not palpable or tender and the urine in the intervals is absolutely normal. The apparent similarity between these two affections with their single symptom, hemorrhage, is due only to the fact that the tests for examining the urine in hematuric nephritis have not been sufficiently delicate. More sensitive tests will reveal minute amounts of blood and tube-casts. The prognosis for both affections is good as a rule; it is extremely rare that the hemorrhage is so intense as to require an operation. Pain in the kidney due to nephritis is generally a dull ache, more pronounced after physical exertion and subsiding during rest. But nephritis may at times induce a typical colic though the urine is free from pathologic content. With stone colic red corpuscles are always to be found in it. After the attack has subsided, examination of the urine with sensitive tests (20 per cent. sulpho-salicylic acid), will reveal traces of nephritic albumin and tube-casts. This colic nephritis may be associated with the hematuric nephritis; the colic is the result of sudden edema of the kidney. In conclusion he expatiates on the good prognosis of chronic nephritis in many cases; the kidneys may become contracted in time but not until after several decades, during which the patient feels well. The vascular system, heart and blood-pressure behave as in normal conditions; the albuminuria is often a casual discovery. All this applies especially to the arteriosclerotic kidney; the patients may reach the age that their other vital organs allow. The atrophic process in the kidney corresponds merely to the normal changes with age in the other organs.

82. **Pregnancy Blindness.**—In Himmelheber's case a woman of 34, with chronic nephritis, in the fifth month of her seventh pregnancy developed amaurosis with headache and detachment of the retina on both sides. Abortion was induced and was followed by retrogression of the detachment of the retina, but the atrophy of the optic nerve proved irreparable. The trephining to relieve the pressure on the brain evidently came too late; the pupil reaction was abolished by the second day after the woman had entered the hospital. The case teaches the importance of emptying the uterus and of prompt measures to reduce the intracranial pressure if vision is not promptly restored.

Virchow's Archiv, Berlin

October, CXCVIII, No. 1, pp. 1-192

84 Melanosarcomatosis of Gray and White Horses. (Die Melanosarkomatose der Schimmelpferde.) A. Jaeger.
85 Origin of Melanin Pigment. (Entstehung des Melaninfarbstoffs.) Id.
86 *Changes in Chromaffin System in Postoperative Fatalities of Unexplained Origin. (Veränderungen im Chromaffinsystem bei unaufgeklärten postoperativen Todesfällen.) J. Hornowski.
87 Hyalin in Stomach and Intestines; Its Appearance, Significance and Source. (Hyalin im Magen und Darm.) Munter.
88 Anatomic Conditions in Intestine in True Megacolon in Contrast to Pseudomegacolon. H. Zoepffel.
89 Chronic Gaseous Emphysema. (Pneumatosis cystoides.) W. Nowicki.

86. To be reviewed editorially.

Wiener klinische Wochenschrift, Vienna

October 14, XXII, No. 41, pp. 1395-1430

90 Serotherapy of Typhoid. (Zur Frage der ätiologischen Serumtherapie des Typhus abdominalis.) R. Kraus and R. v. Stenitzer.
91 *Treatment of Cholera with R. Kraus' Antitoxic Serum. G. Albanus, W. Kernig and Others.
92 Improved Tuning-Fork Test. (Neue Methoden der Stimmgabelprüfung und deren praktische Bedeutung.) R. Barany.
93 Chemistry of Intestines During Ingestion of Alien Colon Bacilli Strains. (Der Darmchemismus bei Verfütterung wirtfremder Kolistämme.) A. F. Hecht.
94 Fat Acids in Stomach Content. (Die Fettsäuren im Mageninhalt.) Id.
95 *Foreign Bodies in Upper Air Passages and Esophagus. (Fremdkörper in den oberen Luft- und Speisewegen mit besonderer Berücksichtigung der Oesophagotomie.) H. Marschik and R. Vogel.
96 Diagnosis, Localization and Treatment of Echinococcus Disease. (Die Echinokokkuskrankheit.) F. Colombani.

91. **Serotherapy of Cholera.**—This communication reports the experiences at St. Petersburg with Kraus' antitoxic cholera serum. It was administered in 54 cases and 55.5 per cent. of the patients died, but in all but 4 of the cases the disease was in its severest form. The mortality without the serum in a corresponding series of 224 equally severe cases was 84.3 per cent. Kernig mentions that intravenous saline infusion proved a valuable adjuvant and may have been partly responsible for the better results in the serum-treated patients, as it was only rarely applied in the other series.

95. **Foreign Bodies in Upper Air Passages and Esophagus.**—In this report from von Eiselsberg's clinic the advantages of prompt tracheotomy are extolled as liable to give better results, in the hands of the general practitioner, than tedious attempts at extraction by the natural route with the inevitable injury from them and the bleeding. Some instructive skiagraphs are given and the point emphasized that a foreign body in the esophagus generally entails the same dangers as an incarcerated hernia. If extraction is not promptly successful, an operation should follow without delay. In 11 cases reported in detail, the outcome was favorable in 9, recovery taking place in from two to seven weeks. One child who had swallowed a coin succumbed to pneumonia a week after the esophagotomy. The other fatality was in the case of a man of 41 who had swallowed two false teeth set on a plate. After attempts at extraction with fingers and induced vomiting had failed, a physician tried to push the set down into the stomach and apparently succeeded as a sponge held in a coin catcher was passed through into the stomach and the patient was able to eat bread and potatoes, the stomach tube could be introduced without effort and Roentgen screen examination was constantly negative, but the patient complained of pain in the chest and a hard sound introduced encountered an obstacle, although the soft stomach sound passed readily into the stomach. Esophagotomy over a week after the teeth had been swallowed finally resulted in their removal, but in loosening the impacted teeth the wall of the esophagus was perforated, and septic pleurisy followed, which was soon fatal. The practice at the clinic is to introduce a sound and examine with the esophagoscope and try to remove the foreign body if known to be round and not firmly fixed. But if the case is old and the foreign body has pointed edges or is firmly impacted, esophagotomy is done at once for fear of digging a groove in the wall of the organ as the article is drawn out. The food after the operation is given through a bougie and nothing but milk and tea by the tablespoonful is allowed for the first two days. The third day the bougie is removed and the tampon in the second week, and healing is usually complete by the end of the third week.

Zentralblatt für Chirurgie, Leipsic

October 30, XXXVI, No. 44, pp. 1497-1528

97 *Proper Moment to Commence the Operation Under the First Whiffs of Ether. (Erkennung des richtigen Momentes im Aetherrausche.) J. Landström.

97. **Operating Under First Whiffs of Ether.**—Landström keeps the operating room perfectly quiet and watches the patient's throat as the ether is given. As soon as the patient feels the fumes of ether salivation is induced and he swallows at brief, regular intervals. When the anesthesia is deep enough to suspend the swallowing reaction to the salivation, this is the right moment for the operation to begin. So Landström waits until the patient ceases to make the swallowing movements or the intervals become much longer, and then commences the operation without further tests of the patient's sensibility.

Zentralblatt für Gynäkologie, Leipsic

October 9, XXXIII, No. 41, pp. 1417-1448

98 Advantages of Momburg Belt Tourniquet in Obstetrics. (Zur Anwendung der Blutleere der unteren Körperhälfte nach Momburg in der Geburtshilfe.) F. Weber.
99 Extraperitoneal Cesarean Section. (Zum extraperitonealen Kaiserschnitt.) M. Stolz.
100 Operative Treatment by Vaginal Route of Rupture of the Uterus. E. Falk.

October 16, No. 42, pp. 1449-1488

101 Application of Over-Pressure Apparatus to Revive Asphyxiated New-Born Infants. (Widerbelebung asphyktischer Neugeborener mit Ueberdruckapparat.) C. Hoerder.

October 23, No. 43, pp. 1489-1520

102 Cesarean Section. (Zur Kaiserschnittfrage.) R. Olshausen.
103 Disinfection of Parturients. (Zur Frage der Desinfektion Kreissender.) M. Hofmeier.
104 Toxic Action of Human Placenta Extract in the Rabbit. (Ueber Besonderheiten der Giftwirkung des menschlichen Placentasaftes beim Kaninchen.) F. Schenk.
105 Hematoma of the Vulva. G. Neumann.

Gazzetta degli Ospedali e delle Cliniche, Milan

October 24, XXX, No. 127, pp. 1337-1352

106 *Influence on Metabolism of Chlorids, Phosphates and Water of Intrarectal or Subcutaneous Injection of Oxygen. (Il ricambio dell'acqua e dei sali, cloruri e fosfati, nei trasmodatori di bevande alcooliche, in rapporto alla sovraossigenazione extrapolmonare.) T. Salvetti.

106. **Influence on Metabolism of Rectal or Subcutaneous Injection of Oxygen.**—Bernabei's method of what he calls extrapulmonary superoxygenization was described in THE JOURNAL, May 23, 1903, p. 1474. Salvetti here describes the influence of this treatment on the elimination of water, of chlorids and of phosphates, especially in persons habitually taking alcohol. His findings confirm anew the notable stimulating action of the oxygen on the torpid cells, rousing them from the torpor resulting from alimentary intoxication, especially alcoholic intoxication.

Riforma Medica, Naples

October 25, XXV, No. 43, pp. 1177-1204

107 *Septicemic Fevers. (Febbri e febbricole setticemiche polimorfe. XII.) G. Rummo.
108 Tumors of Male Breast. (Contributo allo studio dei tumori della mammella maschile.) G. Zoni.
109 *Latent Pneumonia. (Caso di polmonite latente.) G. Gentiti.
110 Two Cases of Multiple Insular Sclerosis. (Due casi di sclerosi a placche.) F. Fornaro.

107. **Septicemic Fevers.**—This is the concluding article in the series in which Rummo has been discussing typhoid, paratyphoid, Malta fever, cryptogenic fever, colon bacillus infection, etc., which he groups together as polymorphous septicemic fevers and febrile conditions. They are the result not only of the action of the specific germs, but of their combinations or possibly their association with germs of different species. He denounces the conception of fever from autointoxication, saying that the importance of autoinfection and of the colon bacillus as the single factor in fevers has been much overestimated. The agglutinating reactions can be relied on in this septicemic group of fevers.

109. **Latent Pneumonia.**—Gentiti calls attention to latent pneumonia as the most dangerous form of this disease. The absence of râles, bronchial souffle, cough and expectoration, indicate a lack of resisting power against the diplococcus. In a case of this kind described, the patient was a man of 46, with a family history of tuberculosis and a long preceding tuberculous affection of the testicle requiring operative measures. The chill, pain in the right intercostal space, intense headache and high fever were not accompanied by any local signs of pneumonia for several days, but then slight expectoration followed and the pneumococcus was found in the sputum.

Hospitalstidende, Copenhagen

September 22, LII, No. 38, pp. 1169-1208

111 Multiple Edema Accompanied with Hemorrhages. (Et Tilfælde af multiple Ødemer ledsaget af Hæmorrhagier.) Kjelgaard.

September 29, No. 39, pp. 1209-1248

112 *Life Expectancy of Extra Hazardous Risks in Life Insurance. (Nogle Bemærkninger om Livsforsikringens "mindre gode Liv.") E. Salomonsen. Commenced in No. 38.

112. **Ultimate Fate of Extra Hazardous Risks Among the Insured.**—Salomonsen declares that the medical aspect of life-insurance is gradually working into a science, as the examiners are learning to estimate the "statistical prognosis" with as much accuracy as physicians now are able to estimate the clinical prognosis in a given case. Until recently the physician's interest in a case ceased when the patient had completely recovered. The surgeons introduced a revolution in this respect, as they found that they had to keep track of their patients to justify the expediency of their operative measures, proving in black and white that the life expectancy had been increased by their intervention. Physicians are now seeking to follow them in this line, trying to determine the influence on the life expectancy thereafter of the disease through which they have carried the patient and the influence the disease will have on the general resisting powers in later life. As a contribution to this subject he has been investigating the after-history of the candidates accepted with an extra rate by the Danmark, a Danish life-insurance company. He has thus sifted out 2,100 cases of extra-hazardous risks in going over the records of 30,000 insured between 1873 and 1906. His surprise was great when he found that the mortality among them was only 106 while the estimated mortality of a corresponding number of normal risks is 101.84. Another surprise was the discovery that the deaths were seldom due to the affection for which the insured had been rated as an extra risk. This has been shown in regard to hernia in the statistics from the German Gotha insurance company. Out of 3,104 persons with hernia insured, the hernia was responsible for the death in only 0.38 per cent. On the other hand, fatal incarcerated hernia caused the death of 0.2 per cent. who had no signs of hernia at the time of the medical examination. The mortality from syphilis is increasing among the syphilitics insured in the Scandinavian and other countries of Europe as it is now accepted as responsible for general paralysis. The statement by a medical examiner that the candidate has had syphilis but that it was mild and brief and consequently may be disregarded, is not endorsed by the companies now, as time has shown that general paralysis is most liable to develop in these mild cases owing to the lack of intensive treatment. In regard to tuberculosis, also, the general practitioner is liable to be more optimistic than is justified by the facts to date. The statistics from the sanatoriums, etc., include too few cases and extend over too few years to justify at present a favorable prognosis in regard to complete recovery after the disease has once been installed in one or both lungs. Some companies regard chronic otitis media as demanding an extra rate, but the mortality from this cause in the Danmark has been very low and in the Gotha company it was only 0.12 per cent. of 46,480 insured. The Danmark experiences with appendicitis confirm the assumption that the first attack is the dangerous one. None of the insured regarded as extra risks on account of preceding appendicitis died of appendicitis later; the deaths from it were all in persons free from a history of appendicitis. The Italian and Swiss companies have not suffered from losses with syphilitics so much as the Scandinavian, and he is inclined to accept the theory that this infection has become attenuated in these other countries where it is more prevalent, the population having become acclimated to it, as it were. He warns that in studying life-insurance statistics it must not be forgotten that the persons who drop out after keeping up their policies for a longer or shorter period are liable to prove misleading in drawing conclusions from the figures recorded. The Danmark statistics do not indicate that heredity has much influence on the development of cancer, but accurate knowledge on this point can be obtained only by study of the comparatively few who have been on the books for long series of years. He cites 15 cases of these extra-hazardous risks in which the dubious prognosis was confirmed by the death within a few years. In 6 in this group, a previous bronchitis or pneumonia had been followed by very protracted convalescence, several months elapsing before the men were able to resume work, but the physical findings were normal at the time of the medical examination for the company. In another case a man of 35 six years before had had a contusion of the chest followed by expectoration of a couple of teaspoonfuls of blood, but he soon recovered and had no trace of hemorrhage afterward. The breath sounds were a trifle diminished in intensity in the supraclavicular but not in the supraspinous fossa; otherwise the findings were normal. The examiner declared the man sound, but he died of consumption six years later. On the other hand, the records show numbers of insured apparently far more seriously handicapped who are still in good health. Salomonsen urges in conclusion that scientific study of the life expectancy after certain affections is liable to throw light on many other branches of medicine.

Books Received

All books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. A selection will be made for review in the interests of our readers and as space permits.

THE MEDICAL COMPLICATIONS, ACCIDENTS AND SEQUELS OF TYPHOID FEVER AND THE OTHER EXANTHEMATA. By Hobart Amory Hare, M.D., B.Sc., Professor of Therapeutics in the Jefferson Medical College of Philadelphia, and E. J. G. Beardsley, M.D., L.R.C.P., Assistant Physician to the Out-Patient Department of the Jefferson Medical College Hospital. With a Special Chapter on the Mental Disturbances Following Typhoid Fever. By F. X. Dercum, M.D., Professor of Mental and Nervous Diseases in the Jefferson Medical College. Cloth. Pp. 391, with 26 illustrations. Price $3.25 net. Philadelphia: Lea & Febiger.

HANDBUCH DER GESAMTEN MEDIZINISCHEN ANWENDUNGEN DER ELEKTRIZITÄT einschliesslich der Röntgenlehre. Herausgegeben von Prof. Dr. med. H. Boruttau, Privatdozent für Physiologie an der Universität Berlin, und Prof. Dr. med. L. Mann, Privatdozent für Nervenheilkunde an der Universität Breslau. Band I. Paper. Pp. 599, with illustrations. Leipzig: Dr. Werner Klinkhardt, 1909.

SURGERY OF THE BRAIN AND SPINAL CORD. By Prof. Fedor Krause, M.D., Geh. Medizinalrat Dirigierender Arzt am Augusta Hospital zu Berlin. Translated by Prof. Herman A. Haubold, M.D., Clinical Professor in Surgery, Bellevue Hospital and New York University Medical College. Vol. I. Pp. 282, with illustrations. Price, $6.00. New York: Rebman Co.

DIAGNOSTIC METHODS, Chemical, Bacteriologic and Microscopic. By Ralph W. Webster, M.D., Ph.D., Assistant Professor of Pharmacologic Therapeutics and Instructor in Medicine in Rush Medical College, University of Chicago. Cloth. Pp. 611, with 211 illustrations. Price, $6.00 net. Philadelphia: P. Blakiston's Son & Co., 1909.

A SYSTEM OF SYPHILIS. Edited by D'Arcy Power, M.B., F.R.C.S., and J. Keogh Murphy, M.D., M.C., F.R.C.S. In Six Volumes. Vol. III. With an Introduction by Sir Jonathan Hutchinson, F.R.S. Cloth. Pp. 267, with illustrations. Price, $13.50. New York: Oxford University Press, 1909.

FOOD INSPECTION AND ANALYSIS. By Albert E. Leach, S.B., Chief of the Denver Food and Drug Inspection Laboratory, Bureau of Chemistry, U. S. Department of Agriculture. Second Edition. Cloth. Pp. 929, with 278 illustrations. Price, $7.50. New York: John Wiley & Sons, 1909.

ATLAS DER ANATOMIE DES MEDIASTINUM IM RÖNTGENBILDE. Von Dr. Friedrich Albin Hoffman, o. ö. Professor und Direktor der medizinischen Poliklinik an der Universität Leipsig. Cloth. Twenty-five radiographic plates. Price, 12 marks. Leipsic: Dr. Werner Klinkhardt, 1909.

LA CYCLOTHYMIE: De la Constitution Cyclothymique et de ses Manifestations (Depression et Excitation Intermittentes). Par le Dr. Pierre-Kahn, ancien interne des hôpitaux de Paris et de la Salpêtrière. Paper. Pp. 250. Price, 6 francs. Paris: G. Steinheil, 1909.

FESTSCHRIFT ZUR VIERZIGJÄHRIGEN STIFTUNGSFEIER DES DEUTSCHEN HOSPITALS. Paper. Pp. 593, with illustrations. Herausgegeben von dem medical Board im Auftrage der Aerzte des deutschen Hospitals und Dispensary in der Stadt New York, 1909.

SURGICAL DIAGNOSIS. By Alexander Bryan Johnson, Ph.B., M.D., Professor of Clinical Surgery in the Columbia University Medical College. Vol. III. Cloth. Pp. 708, with 275 illustrations. Price, $6.00. New York: D. Appleton & Co., 1909.

WALSH'S PHYSICIANS' HANDY LEDGER. A Companion to Walsh's Physicians' Combined Call-Book and Tablet. Half Leather. Pp. 600. Price, $3.50. Washington, D. C.: Ralph Walsh, 1804 H Street, N. W.

A PRACTICAL STUDY OF MALARIA. By William H. Deaderick, M.D., President of the Tri-State Medical Society. Cloth. Pp. 396, with illustrations. Price, $4.50 net. Philadelphia: W. B. Saunders Co., 1909.

WALSH'S PHYSICIANS' COMBINED CALL-BOOK AND TABLET. Flexible Leather, with flap and pocket. Price, $1.50. Washington, D. C.: Ralph Walsh, M.D., 1804 H Street, N. W.

A MANUAL OF THE WORKING METHODS AND STANDARDS FOR THE USE OF THE MEDICAL MILK COMMISSION. Paper. Pp. 24. Compiled by the American Association of Medical Milk Commissions, 1909.

E. MERCK'S ANNUAL REPORT of Recent Advances in Pharmaceutical Chemistry and Therapeutics. Paper. Pp. 394. 1908. Volume XXII. E. Merck, Chemical Works, Darmstadt, 1909.

THE MEDICAL RECORD VISITING LIST OR PHYSICIANS' DIARY FOR 1910. Flexible Leather, with flap and pocket. Price, $1.50. New York: William Wood & Co.

PROCEEDINGS OF THE THIRD ANNUAL CONFERENCE OF THE AMERICAN ASSOCIATION OF MEDICAL MILK COMMISSIONERS. 1909. Stiff covers. Pp. 142.